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The First Donald Fraser Memorial Lecture[1]

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"DR. Donald Thomas Fraser, Associate Director of the Connaught Medical Research Laboratories and the School of Hygiene, died suddenly on July 19, 1954, in Santiago, Chile. Although he suffered a serious heart attack several years ago, Dr. Fraser carried on his work with the courage that characterized his whole life. He was making a tour of South American medical schools and schools of public health, at the request of the World Health Organization and under the auspices of the Pan American Sanitary Bureau, when he was stricken with a heart attack which caused his death ten days later." This is from the announcement in the forty-first annual report of the Connaught Medical Research Laboratories.

We are gathered here today to pay honour to the memory of Don Fraser and in so doing to inaugurate the memorial lectures to be named after him. The committee in charge of this plan has decreed that while future papers will be devoted to scientific subjects, probably in the field of bacteriology and immunology, this, the first lecture, is to be about Don and his place in the progress of medicine in Canada. But first a word about the genesis of this undertaking.

Back in 1946 the graduates of the School of Hygiene of the University of Toronto adopted that rugged American custom of holding breakfast meetings during the annual conventions of the American Public Health Association. At the meeting in Buffalo in 1954, about three months after Don's death, it was proposed that something appropriate should be done to honour his memory. Dr. J. M. Mather and Dr. J. H. Baillie, who were then president and secretary of the group were instructed to canvass opinion and receive contributions.

The following year at the Kansas City meeting it was decided that a suitable

[1]Presented at the fiftieth annual meeting of the Canadian Public Health Association, Halifax, N.S., May 31–June 2, 1960.

[2]Deputy Minister of National Health, Ottawa, Ontario.

medal should be struck to be presented to the student attending courses at the School of Hygiene considered most worthy of such recognition. This proposal was carried through and it is interesting to note that the first Don Fraser medal was awarded to Dr. T. D. Strand of Oslo, Norway in 1957.

Not being content with the medal and having some funds still in hand, the School of Hygiene Alumni Association, as the group was re-named, decided that it would be appropriate and worthwhile to establish a lectureship in Dr. Fraser's name: the lectures to be given at the annual meetings of the Canadian Public Health Association. Dr. Baillie, who was president on this occasion, was instructed to make suitable arrangements and the result is this meeting today.

Don was born in Toronto in 1888. He began his schooling at St. Andrews College. This was followed by Harbord Collegiate Institute. He entered the University in the Natural Science Course in Arts. This was based mainly on physiology and biochemistry and was the equivalent of the present pre-medical course. In 1912 he received his B.A. and three years later he graduated in medicine.

Dr. Fraser grew up in the very pleasant, stimulating and satisfying academic atmosphere of Toronto just after the turn of the century. His father was a famous member of the faculty of the University and headed the department of Spanish and German. Mrs. Fraser, who came from Alsace and spoke German and French, saw to it that her family accepted and practised both languages. She also took seriously her duties as wife of a professor, as she conceived them, and this included entertaining all of her husband's students each year. It is not surprising that Don turned back to the University when the time came to choose his career.

During intervals of his formal schooling he developed an abiding love for outdoor life. Probably the Fraser cottage at Go-Home Bay provided the main inspiration for this. Certainly it remained an important haven for him throughout his life. He knew the birds and could give a fair imitation of the songs of many of them. The smell of a campfire, the motion of a canoe, the zest of climbing and skiing, all of these meant a great deal to him. One had the impression that they were a necessary part of what he regarded as a well rounded life.

Painting and music were also taken up along the way. He was never much concerned about his own performance although he did like to try his hand and took a natural and engaging pride in showing his skill. He was much more interested in understanding the artists themselves and what they were trying to do or say. Lawren Harris was one of his favourites and characteristically Don followed with keen interest his later ventures in experimental or abstract art.

When Don left the medical school in March 1915 World War I dominated everything and his one idea was to see some action so he joined the Canadian Army Medical Corps as a private. His sister, Dr. Frieda Fraser, recalls that his first job was swabbing for meningococcus during an epidemic in Belleville—certainly a fitting initiation.

Meanwhile the R.A.M.C. in Britain was looking for doctors. They offered a commission and immediate foreign service so Don accepted and was packed

off to Egypt, a Lieutenant in the 94th Field Ambulance. He described his job there as helping to guard the wrong side of the Canal. He must have tired of it and wangled a transfer because by the summer of 1916 he was campaigning in France.

At the battle of the Somme on July 1st, 1916 Don won the Military Cross. Fortunately we have the story of this affair in his own words. In a letter to his family he put it this way:—

"Our Division went over the lid, otherwise made the attack in the Somme region on the 1st of July and it was principally our Ambulance that had the running of the medical arrangements for, during and after this attack. . . . It seems pretty clear that the enemy expected the most severe blow just where our Division happened to make the attack and consequently our casualties were heavy. As for our own unit we got off lightly—only a few wounded. Everybody worked hard and I think we established some sort of record for rapidity of evacuation, plus numbers evacuated, plus keeping a record of cases that passed through our hands. The Colonel is, of course, pleased that we did well, pleased that his boss the A.D.M.S. is pleased who in turn pats himself on the back that the General is pleased. Obviously the General must have been pleased for he said something like this. "The Artillery and Infantry did excellent work but if everyone had done as well as our Ambulance we would be in Berlin by now". Of course that would be more palatable with salt. . . ."

From Don's friends in the Division Mrs. Fraser learned that much of this outstanding success was due to his careful preparation and detailed planning. He spent several nights and days up in the front trenches studying the lay-out, making friends with the troops and no doubt asking inumerable questions.

Later in 1917 Don hurried back to Toronto hoping to see his father before he died; but that was not to be. He may have met Dr. J. G. FitzGerald at this time. Certainly at some point during his army career he was asked to give some thought to the Connaught.

Early in 1918 he joined a British party going to China to recruit a labour corps for France. Soon after he reached the camp at Wei Hai Wei an epidemic of typhus broke out. He saw them through this and was mentioned in despatches for his devotion to duty. One wonders how he managed to escape the infection because he was never one to spare himself or leave the dirty work for someone else to do. On two occasions he found lice in his own clothing. The entry of the United States into the war with a consequent heavy demand on shipping put an end to the movement of coolies to Europe. Don came home, back to a captaincy in the C.A.M.C., to work in a laboratory, and above all to marriage.

Mary Shenstone and Don had known each other since their early teens. There were interruptions while she was away at Bryn Mawr and working in New York and Don was studying medicine and in the Army. But they had kept in touch with each other and in September 1918 they were married. Many of you know Mary Fraser and will remember the warm hospitality of the house in Wychwood Park. They brought up two sons and a daughter, Donald, Ian and Nancy and two foster children, the daughters of an old classmate Dr. Ray Hodge. That the Frasers were a happy couple must have been abundantly evident to all who knew them together.

Meanwhile, what was the situation in medical circles in the Toronto to which Don returned? The outbreak of war in 1914 had marked the end of a way of life. At about the same time there had begun important new stirrings in the public health field. A dynamic force in this movement was Dr. FitzGerald. He began in 1912 the work which was to result shortly in the founding of the Connaught Laboratories and ten years later in the creation of the School of Hygiene. Aiding and abetting him were three outstanding men.

Dr. John W. S. McCullough, Provincial Medical Officer of Health and as such the chief executive officer of the Provincial Board of Health (as the present department of health was then called), was at the height of his career and had a well deserved international reputation. Certainly, his prestige and counsel were important in the advancement of FitzGerald's plans. On the teaching side his main ally was Dr. John A. Amyot, who had initiated a post-graduate course in public health in 1912. He was to hand this work on to FitzGerald when he left his post as Director of Laboratories of the Provincial Board of Health to become the first deputy minister of health at Ottawa in 1919. The third important figure who meant so much to FitzGerald not only in those early days but throughout his life, was Dr. R. D. Defries. He moved over from the Provincial Laboratories to the Connaught for the initial purpose of producing tetanus antitoxin for the army. That was in 1914.

During the war the Connaught Laboratories amply justified their existence. The five-stall galvanized iron stable on Barton Avenue had been superseded by the new University Farm, thanks to the foresight and generosity of Sir Albert Gooderham. The original purpose of preparing diphtheria anti-toxin had been achieved. Rabies vaccine and other products had been added but above all the demands of the war emergency had been met. Probably the fledgling Connaught's most important achievement was the preparation of tetanus antitoxin for the armed services. This story is too long to tell here; sufficient to say that they produced 250,000 doses of antitoxin. Such was the state of affairs in 1919.

As already mentioned Don had been approached by FitzGerald with an invitation to join him. It must have been an interesting discussion. FitzGerald knew where he was going and could point out the way to others with an infectious enthusiasm which would be bound to strike Don as good sense and opening an attractive avenue in medicine which he would like to travel along and explore. They reached an understanding and Don's first appointment was to the Connaught Laboratories as a bacteriologist. This was followed in 1920 by appointment to the staff of the Department of Hygiene and Preventive Medicine in the Faculty of Medicine. This dual interest, with which of course research was combined, was maintained throughout the rest of Don's life.

One of the great problems facing public health people in those days was diphtheria. Toxoid was yet to come; antitoxin was widely used and toxin-antitoxin was being tried out in the United States. Don's first ventures in research were related to diphtheria although, as it turned out, his first published paper in 1920 was with Dr. A. H. W. Caulfield on bacteriological and serological aspects of epidemic influenza.

And then came insulin to change the whole scene; indeed to change the whole aspect of medical research in Canada.

Banting and Best started their experiments on May 16, 1921; the first patient was treated on January 11, 1922. A great discovery of this kind inevitably stirs up an urgent demand for new and more refined methods of measurement and control. Don tackled the problem of the assay of the new product, insulin. Dr. D. A. Scott whose contribution to the development of the discovery was so very important, is authority for the statement that Don was "the first investigator to use mice in the assay of insulin and the first to publish work on this method of assay". His paper appeared in 1923 and was followed by a second in the same year.

Meanwhile Banting and Best had been joined by Scott with P. J. Moloney and D. M. Findley also assisting. The new insulin team was rapidly forming. At some point in this process Don either was reassigned to the diphtheria program or he made the decision himself. In any case he resumed his work in bacteriology and immunity and remained faithful to it for the rest of his career.

It is interesting to glance over the titles of the papers brought together in Volume II of the "Studies from the Connaught Laboratories", covering the years 1922 to 1925 inclusive. There were 42 and of these 17 related to insulin; 12 to diphtheria; 5 to scarlet fever; 3 to tuberculosis; 2 to hay fever and the remaining 3 were on influenza, on the scope of tests to be carried out in a sanatorium laboratory and an historical paper on Pasteur. Don's name appears on four papers; 2 on insulin assay; one on the virulence testing of diphtheria bacilli and the fourth on the skin testing of scarlet fever toxins. The contrast between this list and what one would find today is striking.

Much of the diphtheria work at that time centered around the concept of control by identifying carriers of virulent organisms. No doubt there was also a continuing worry as to whether the famous "Park 8" strain used for antitoxin production was sufficiently wide in its valence. But a new era in diphtheria research was just around the corner. In 1924 Ramon of the Pasteur Institute in Paris announced the production of "anatoxin" or as we know it, toxoid.

FitzGerald lost no time in getting to Ramon's laboratory to see for himself. He was impressed and promptly cabled details to Toronto. Peter Moloney, acting under this long range direction, produced diphtheria toxoid and was probably the first to do so in North America. It is not our purpose here to review the toxoid story, a really splendid chapter in our medical history, sufficient to say that a quite remarkable team in Toronto took the new product in hand, perfected it and above all proved it. On the production side were Peter Moloney and Mort Orr; evaluating it were Neil McKinnon and Mary Ross; studying the immunology of the product was Don Fraser and hovering over all was that master of detail and co-ordinator extraordinary, Bob Defries. Of course there were others and the numbers grew but most will agree that this little band provided the drive that put diphtheria toxoid on a firm foundation.

As already mentioned Don's interest centered on the immunology of infectious disease. Diphtheria and its nemesis, toxoid, gave him a splendid field for study. He dug into the mechanisms of transmission, the types of organisms involved and the response of the host to infection and the administration of toxoid. Using animal skin and diphtheria toxin he perfected a method of assaying very small amounts of antitoxin which was to prove of great value

in the study of individual immunity, in the appraisal of the Schick Test and in following response to immunization. His studies on the duration of immunity and the importance of the recall dose in firming up a more durable immunity were of basic importance.

In addition to Don's work in diphtheria he helped and encouraged others in their research problems. Many of you here will remember the warm and friendly way in which this help was given. Two examples of more than ordinary significance might be mentioned. He supported Pat Sneath in his successful production of tetanus toxide, which had been described by Ramon. This was well before the second war and ensured that this valuable product would be at hand when so urgently needed. He also collaborated with Dr. Nelles Silverthorne in the development of an effective pertussis vaccine in which freshly isolated strains were used.

There was another side to Don's experiments that became a legend around the Connaught and this was his use of himself or members of his family as guinea pigs. It arose from his conviction that he could not advocate the use of serums, vaccines, etc., on others that he would not use on himself or his own children. On one occasion after a meeting in Montreal he was confronted with a large newspaper headline that read "Toronto Doctor Experiments on His Own Children." There was a grain of truth in this because they were probably the first in North America to receive diphtheria and tetanus toxoid.

Mary Fraser put up with this for years until one time he gave himself something, possibly a staphylococcal preparation, which made him quite ill. She was up with him all night that time and in her own words, "I think it was the *last* time for Frieda and I both spoke our minds after that."

Peter Moloney tells the story of the time when Professor Wastenays came to the laboratory for help in dealing with an attack of boils. A hot argument developed about the cause of boils. Don insisted on the importance of individual resistance as against the virulence of the organism. To back up his argument he transferred pus from a Wastenays boil to a scratch on his own arm and rubbed it well in. Either he was right or the gods smiled on him because the inoculation did not take.

In addition to all this he preached the gospel of prevention by immunization to all who would listen, especially in the United States. That he became a leading authority in his field is attested by the fact that he was president of the American Association of Immunologists in 1938–39 and of the American Epidemiological Society in 1948. He was also a prominent member of the American Public Health Association and served on the Lasker Awards Committee, the Committee on Research and Standards and took an active part in the publication of the famous manual on "the control of communicable diseases in man". In Canada he was, of course a greatly beloved senior member of the Canadian Public Health Association and in 1934 he was elected a Fellow of the Royal Society of Canada.

So far we have been considering Don as a scientist but there was another side to his life—in fact two other sides of seemingly equal importance. Besides being a scientist he was a teacher of outstanding success and, in addition and apart from what you might call his professional vocations, he had an avocation which was to live a full life and enjoy his family and friends. One sometimes

wondered if the last part was not the most important of the three but then an encounter with Don when he was teaching or working on one of his problems made one realize that the good life as he understood it did not imply a frivolous approach or skimping of his work. While he was always alert and ready for a joke, nevertheless, he believed that a good measure of hard work was necessary. You might say that balance was the guiding principle in his living.

There has been a good deal of speculation about the relative importance of Don's contribution in research and in teaching. Many of his students would say that he was at his best and obviously happiest when he was teaching. Defries supports this view and has put it this way. "He enjoyed teaching and was happiest in the company of students, particularly a laboratory group. As a teacher he was always informal, conducting his teaching in a conversational manner, often with a pipe in his mouth and dressed in a well-worn white coat. He was not dogmatic. He was always reasonable and encouraged expressions of opinions different from his own." His sister Frieda who worked so closely with him believes that in his mind teaching and research were inseparable and complementary parts of a balanced process. She adds, ". . . his sympathetic interest in the person with whom he was discussing research, or the students he was teaching, was a necessary counterpart to his interest in the problem or ideas under discussion". Certainly his interest in research illuminated his teaching. This had important consequences in that a fair number of his students went on into research as their life work. Probably the simple truth is that he was a very successful professor within the full and best meaning of that title.

His generosity and unfailing good nature were among his most endearing qualities. Everyone turned to him. As D. A. Scott has put it, "Ask Fraser" became a solution to any baffling problems around the lab. He took a leading part in helping fugitive scientists. To him the academic life of the University could have real meaning only in a setting of complete freedom. The Nazi oppressions in Germany gave him great distress and he was foremost among those who welcomed and helped scientists fleeing from persecution. Many a scientific paper was practically rewritten by Don for unfortunates struggling with a strange language.

When the second world war came along the Connaught was again called on to greatly expand to meet the emergency. Over the years both the School and the Laboratories had steadily increased in size. Don had reached the rank of associate director of both. With the wartime expansion added the total operation became very large and he found himself more and more in the role of an administrator and supervisor of the research of others. This was not much to his liking but there was a job to be done. And what a job it was! You may recall that their main accomplishments were the production of dried human serum, (which was stimulated by Dr. Charles Best) gas gangrene antitoxins, typhus fever vaccine, cholera vaccine and influenza vaccine. Don had a part in all of this but his main direct interest was in the new T.A.B.T. combination. Dr. James Craigie led the work on the improvement of the T.A.B. vaccine part and Don looked after the addition of the tetanus toxoid. Throughout all of this period there was an extra load of teaching due to the absence of some of the staff in the armed services.

When the war was over and more or less normal living could be resumed Don found himself still in the dual role of senior administrator and teacher. There was never any doubt as to his preference. He was always willing and certainly able to help with the complex scientific problems of the Connaught. His door was always open to those seeking help and counsel. But it was with students that he still found greatest satisfaction. It is significant that the mission which was terminated by his death was for the purpose of enabling the School to better serve students from South America.

We can never appreciate fully the true worth of a wise and lovable person like Don Fraser. The fates decreed that he become a member of a remarkable group of people. Together they created a unique institution and played a major part in the advancement of public health. He was a true scientist and made his influence felt in that field. He was a splendid, if somewhat unorthodox, teacher. His stimulating influence in this work was also an indirect contribution to research. But as we have already noted, there was a third side to his make-up and it may well have been through this that he made his most important contribution to the Toronto group.

Many of you will remember his little ways. The struggle to produce those battered looking cigarettes which never quite seemed adequate. The short sentences; sometimes quite blunt, but they came with a smile and you knew they were honest opinion without the slightest concern for himself. He loved fun. All who knew him can attest to that. It included everything from strenuous games and trials of skill to an uninhibited night out on the town. But he also loved good music and good painting. He delighted in skill and was eager to understand the interests of people in other walks of life, especially if they were expert craftsmen. How can one do him justice other than to say that to a keen mind and active intelligence was added the gift in generous measure of friendship and human understanding. The contribution of such a man was beyond price.

I am sure that the reason we are here today to honour his memory is because of these qualities of heart and mind which made him not only a well balanced and complete man but also a lovable friend.

The Role of Vaccine Therapy Against Rabies in Animals[1]

R. J. McCLENAGHAN,[2] D.V.Sc.

PASTEUR introduced a preventive treatment for rabies which originally consisted of a course of 21 injections. The modern simple modification requires a course of fourteen days of injections. Use of this preventive treatment was not a practical procedure for the protection of animals.

Following the discovery that rabies could be grown in chick embryo, research workers found that by a series of chick embryo egg passages, rabies virus could be attenuated to such a degree that it was rendered incapable of producing the disease, but at the same time could confer immunity. The one-dose method of prevention is now in use. There are two vaccines, one for use in cattle and the other in dogs. It is important that the vaccine is of the same strain of rabies virus, but the one for cattle has received many more passages in chick embryo than the preparation used in immunizing dogs.

Rabies Vaccine in the Control Program

Prior to the introduction of the chick embryo type vaccine, the Health of Animals Division was not prepared to accept vaccination as part of a rabies control program. It had been found through years of experience that through the control of the movement of dogs by means of tie-up orders and the elimination of stray dogs by their systematic destruction, outbreaks of rabies could be brought under control and the disease eventually eradicated. This had been the experience of the Division since rabies control was undertaken in 1906.

Our records indicate that the earlier outbreaks of rabies in Canada involved dogs principally and that the source of infection was usually traced to an imported dog, either from the United States or a European country. By requiring that dogs imported from the United States be accompanied by an anti-rabies certificate recording that the animal had been vaccinated during the preceding twelve months, the incidence of rabies in dogs imported from that country was greatly reduced.

In 1947, rabies was identified for the first time in foxes at Baker Lake, Northwest Territories. This diagnosis established without doubt that the disease known as "Arctic Fox Disease" was in reality rabies and that the wild life of the northern areas was a potential reservoir of infection. We are now quite certain that rabies existed in the Territories for at least 60 years prior to this date. In 1952, when rabies first appeared in northern Alberta, it became

[1]Presented at the tenth annual meeting of the Ontario Public Health Association, September 28, 1959, Toronto, Ont.

[2]Director, Contagious Diseases Control, Health of Animals Division, Canada Department of Agriculture, Ottawa, Ontario.

obvious that the old procedure of dog control would not be effective in controlling the disease where the reservoir of infection was in wild life. It was decided, therefore, that a vaccination policy should be adopted as an adjunct to our existing program.

Initially, it had been hoped that we would be able to vaccinate all dogs which might come in contact with wild life and, as a result, be exposed to infection. In commencing the work, vaccination was used as a protective barrier between the source of infection in the wild life and the dog, from which the disease could be transmitted to humans. Dogs were vaccinated in areas which were commonly called "Buffer zones". This plan failed to halt the progress of the disease since it was found that a rabid fox or wolf changed its normal habits and when infected would travel for many miles, spreading the infection by biting any animals with which it came in contact during its travels. This resulted in the establishment of new foci of infection many miles from the primary source. Vaccination under these circumstances proved inadequate.

At this stage it was felt that steps would have to be taken to reduce the level of wild life in a rabies-infected area. To accomplish this, the province of Alberta was the first to embark on a wild life depopulation program. It developed its program through its department of lands and forests for the systematic eradication of wolves, coyotes and the other potential carriers of the infection. Predatory animal control was undertaken in a 30-mile zone. Depopulation of wild life was accomplished by the use of poison baits, snares and shooting. After the Alberta program had been in effect for two or three years the amount of wild life in the area was markedly reduced. This reduction was attributed entirely to the depopulation program and while, no doubt, this program played an important part in the depopulation of the wild life in Alberta, we are now rather doubtful as to whether or not the results can be attributed entirely to any one factor. This is based on our most recent experience in other areas in the country where provincial governments were reluctant to undertake a program similar to that followed in Alberta.

We have observed that after a period of two years from the initial outbreak, the wild life population, particularly foxes, is reduced to a very low level. This demonstrates that nature itself provides for depopulation of excessive numbers in its wild life, and a decrease in the population occurs even in the absence of a planned predator control program. One hesitates to venture the opinion that all the foxes in an infected area die as a result of rabies; nevertheless, this fact should not be overlooked. In addition, wild life authorities have demonstrated that where the level of wild life is high, food scarcities develop and many animals die. Reproduction levels are reduced and the survivors appear to be more susceptible to disease.

Five Point Rabies Control Program

With the introduction of rabies infection into Ontario, it was decided to adopt a five point control program. At the first indication that rabies is present in an area, the local health of animals veterinary officer establishes a reporting system. Contacts are made with all responsible agencies and authorities in the community. The medical officer of health, local police, town or municipal authorities and practising veterinarians are alerted and asked to report all incidents to our office.

Prompt investigation of all suspected, reported cases is conducted. Where a human being has been bitten or contaminated, he is advised to obtain medical advice immediately and our officer reports the incident to the local medical officer of health.

Surveys are conducted to ascertain the level of the wild-life population in the area; also, to what extent dog control measures are in effect.

Dog control measures are established through local municipal authorities who are encouraged to enact better dog control by-laws to eliminate stray, unknown dogs, to establish a licensing system and to provide a dog pound where stray dogs may be held.

Once dog control measures are operating effectively, the Department establishes free vaccination clinics for all dogs and household pets in the infected area. In this program, vaccination plays an important role. In the application of this program we have made numerous observations as to the effectiveness of vaccination in a rabies control program, especially where the reservoir of infection is in wild life.

If vaccination is to be effective, between 70 to 80% of the dogs must be vaccinated. We have observed that some classes of dogs are more susceptible to infection by the very nature or conditions under which they are raised. For example, the hunting dog, the farm dog and the stray dog are the most likely groups to become infected, since they come in closer contact with wild animals. In the case of the hunting dog, it is very often highly prized by its owner and if advised to do so by his veterinarian, he will readily submit it to vaccination. In the case of the farm dog, there is a degree of apathy on the part of the owner to have his dog vaccinated, since, in many cases it is not valuable and it is kept only as a pet for the children or as a watchdog. Then, of most significance, there is the stray or un-owned dog. In the case of the rural dog population, it has been found that less than 25% of the dog owners will present their dogs for vaccination if there is a fee connected with it.

In many small towns and villages less than one third of the dog owners pay dog taxes; this, of course, is also true in large cities. For example, in Toronto there are approximately 28,000 for which taxes are collected; whereas, if we were to apply the ratio of one dog for every six individuals it may be readily seen that many of the dogs would not be reached.

Even though rabies vaccination of their dogs is free, we have found that people must be made fully aware of the presence of the disease in their area before they will bring their pets to the vaccination clinics. In advance of the clinics, therefore, we provide suitable publicity by means of the press, radio, and television, using such means to advertise the time, date, and location of the clinics. By blanketing an area with clinics within a five-mile radius, we obtain an extremely high coverage of all dogs in the area.

While it is a very efficient product, rabies vaccine does have its limitations, and vaccination alone will not control rabies since it is not considered to confer immunity in more than 70% of the animals inoculated. Some experimental work has been done by this Division to prove that in the case of many vaccinations the immunity conferred is of a transitory nature. In addition, there is a tremendous turnover of dogs in rural areas, perhaps as much as 20% within one year, which makes it impractical to rely solely on vaccination as a means of control for rabies.

In view of these varying circumstances, it is essential that every suspected case be reported and investigated, and all contacts quarantined. If there is human involvement, the medical officer of health must be advised and the exposed person instructed to contact his physician.

During the past year, large numbers of cattle and other domestic livestock have been exposed. This Division has been subject to continued pressure by livestock owners to provide free vaccination in the case of their livestock. This suggestion has been resisted on the grounds that we do not have sufficient proof as to the reliability of the vaccine when administered to cattle, and that the tremendous cost involved would not warrant such a procedure. Experi mental work has been done to test the efficacy of various vaccines in cattle, but, to date, the results obtained have been far from satisfactory.

Résumé

Après avoir découvert que l'on pouvait cultiver le virus de la rage sur l'embryon de poussin, les chercheurs mirent au point un vaccin antirabique à virus atténué qui ne pouvait produire la maladie mais pouvait en même temps conférer l'immunité.

Dans la lutte contre la rage des animaux, l'expérience a démontré que l'assujettissement des chiens complété par la vaccination contre la rage supprimera avec le temps la maladie. Dans un programme de vaccination des chiens comme celui qui a été institué par le Ministère, il faut vacciner 70 à 80 p. 100 des chiens.

Comme la seule vaccination ne supprimera pas la rage, il faut mettre en oeuvre une série de mesures qui comprennent entre autres la vaccination des chiens.

Un programme de lutte comprenant les cinq mesures suivantes s'est révélé efficace:

(1) établir un système de déclaration;

(2) examiner sans tarder tous les cas suspects qui sont déclarés; si une personne est mordue, on lui conseille de consulter un médecin et son cas est déclaré au médecin hygiéniste de la localité;

(3) faire des sondages pour déterminer l'effectif des animaux sauvages et préciser dans quel degré les mesures d'assujettissement des chiens sont appliquées;

(4) mesures d'assujettissement des chiens; et

(5) cliniques de vaccination gratuite pour tous les chiens.

The Provincial Laboratory Services in New Brunswick

H. A. BIRD,[1] M.D. and
J. A. MELANSON,[2] M.B., Ch.B.(Edin.), D.Sc., D.P.H.

THE development of laboratory services by the Department of Health in New Brunswick can be portrayed best if it is presented from three different aspects. The first of these is *historical* and will take the form of a résumé of the growth of the service from its very humble beginning in 1918 until the years immediately following World War II when a large expansion and reorganization of the service began. The second aspect will be an account of this *reorganization and expansion* which continues to the present day. The third aspect will present the essentials of the *operations of the service* particularly the method of operation in conjunction with the hospital insurance plan.

The recorded history of the Provincial Laboratory Service is contained in the Annual Reports of the Chief Medical Officer to the Minister of Health, the first of which was made in 1918. The Bureau of Laboratories, as it was first known, was established in that year in quarters provided by the Saint John General Hospital and under the direction of Dr. H. L. Abramson, the first full-time pathologist and chief of laboratories in New Brunswick. From 1899 to 1918 three different physicians had served as part-time provincial bacteriologists. There is no written record of the exact function these part-time provincial bacteriologists performed nor of the actual laboratory work conducted.

The physical beginnings of the laboratory were indeed humble. A single room was provided in 1918 in the General Hospital, Saint John. This was inadequate from the beginning but within three years was hopelessly overcrowded and additional space was provided by the hospital. By the time the additional rooms were prepared the scope and volume of the work carried out by the laboratory had increased to such an extent that this space was already insufficient. This state of affairs persisted until the new General Hospital was completed in 1931 at which time adequate modern quarters were provided in a wing of the new building. These new quarters served well until the end of World War II, by which time they, too, were hopelessly overcrowded.

It is interesting to review the type of work done in the laboratory during these years. In the beginning, the laboratory's main effort was directed toward aiding in the control of communicable disease. Diphtheria was a serious problem and an appeal by the chief of the laboratories for physicians to make

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more use of throat cultures bore fruit to the extent that in 1920–21 throat cultures comprised almost half of the tests done in the laboratory. At the same time other medical laboratory procedures were gradually being adopted. The year 1923 marked the advent of blood chemistry and about the same time the enumeration of blood cells and examination of blood smears became a common procedure. In the first year of operation only 44 tissue examinations were carried out. This procedure gradually increased over the years reaching a high of 9,000 in the years just following the second war. From the beginning, bacteriological examinations of public milk and water supplies were carried out in the laboratory. Because of the difficulties in transportation this was at first limited to Saint John City and its immediate vicinity but was gradually extended to cover adjacent counties. From its inception also the laboratory served as the main depot for the distribution of vaccine and antitoxin.

The ideal of service to the sick and to the public which motivated the chief of the laboratory and his workers is evident in the recurring appeals to medical and hospital authorities to use the laboratory services to their fullest extent. These appeals were made despite the fact that facilities were continuously overcrowded. This desire to give service is exemplified in this quotation from the report of the chief of laboratory for the year 1921. "This department is ready at all times to assist hospitals throughout the province that are desirous of establishing modern laboratories. It is to be hoped that other hospitals will not hesitate to call on us for such assistance as it is the desire of the Department of Health and in the best interests of the citizens of this province that the benefits of laboratory service be as widespread as possible." The same policy prevails today.

The man who had been responsible for guiding the rapid growth and development of the laboratory service, Dr. H. L. Abramson, died suddenly in 1934. After a brief period during which the laboratory was temporarily supervised by Dr. W. J. Baxter, Dr. R. A. H. Mackeen was appointed as Director of Laboratories. Under his guidance the variety and volume of work continued to grow but any major expansion project was postponed by the advent of World War II. During the years 1941 to 1945 Dr. Mackeen served with distinction with the Canadian Army overseas and his position as director was capably filled by Dr. Arnold Branch during this period. A major development and reorganization of the laboratory services began following Dr. Mackeen's return.

Reorganization and Expansion

During the war and in the post-war period, demand for laboratory services from hospitals and public health agencies became so great that it was obvious that a large expansion would have to be undertaken. A start was made by the opening in 1946 of a branch laboratory at the University of New Brunswick in Fredericton, under the guidance of Dr. C. W. Argue, Professor of Biology, for the performance of milk and water bacteriology and serological tests for syphilis. This small branch laboratory provided only slight relief, however, of the pressure on the laboratory in Saint John. In 1948 the director asked for an independent survey of the laboratory facilities and requirements of the province and in 1949 this was carried out by Mr. James Gibbard, Chief,

Laboratory of Hygiene, Department of National Health and Welfare, Ottawa. As the result, definite recommendations were made and the most important of these are summarized here.

Mr. Gibbard recommended that a division of laboratory service be established to serve as the senior public health and medical laboratory for New Brunswick under the Provincial Department of Health. He also recommended that a large central laboratory be erected in conjunction with the Saint John General Hospital and that four branch laboratories be established at specifically designated areas in New Brunswick. These were designated as Moncton, Fredericton, Campbellton and Edmundston. He advised that provision be made for the employment of senior laboratory workers in the fields of bacteriology and biochemistry in each laboratory. These workers would, of course, be in addition to fully trained pathologists. In addition, Mr. Gibbard made general recommendations concerning the training of technicians and the provision of standard reagents and accuracy checks. It may be fairly stated that, in the years following the receipt of this report, these recommendations have been carried out. Early in 1954 a large central laboratory building adjacent to and connected to the Saint John General Hospital was completed. This building provided unexcelled physical facilities and still provides adequate space for all the demands that have been made on it. At approximately the same time a Regional Laboratory adjacent to and connected to the Moncton Hospital was completed and Dr. I. A. MacLennan was appointed director of this laboratory. Early in 1955 the Fredericton Regional Laboratory was completed and work began there under the direction of Dr. D. F. V. Brunsdon. In 1959, the Campbellton Regional Laboratory began operation under Dr. A. D. Hudson. A fifth laboratory, in conjunction with the Hotel Dieu Hospital, Edmundston, is under construction.

Establishments have been revised to include provision for the employment of senior laboratory workers in specialized fields. Several of these top calibre laboratory officers are now in the employ of the department but the demand for workers of this type always exceeds the supply and several posts remain to be filled. The Department of Health has taken full advantage of Federal Health Grants with respect to the training of technicians and other more senior workers but in spite of this there is a continual shortage of technical help.

In November, 1950, a change was made in the method of recording and reporting laboratory work. A unit system, based on that used by the London County Council, was adopted. This unit took into consideration the time required to perform a test and the calibre of worker required to do that particular procedure. The adoption of this system was an effort to record more accurately the work done by each laboratory or department so that they could be compared on a sound basis. This unit system remained in force until 1959. Coincidentally with the occupancy of the new laboratory quarters a new relationship with the hospitals served was also adopted. Under the new system the laboratory service was provided at cost to the hospital for all of the tests which were not supported under specific public health grants. The tests which were supported by grants and therefore provided without direct charge to the hospital or patient were principally those used in controlling com-

municable disease. Tissue examinations were also provided free to the patient; at first only in cases of suspected malignancy but finally to all. All tests on the free list were accepted by the laboratories directly from physicians or public health agencies. All tests for which a charge was made were accepted only from hospitals or through their out-patient departments. Hospitals were entitled to a reasonable mark-up to both in-patients and out-patients in order to compensate for bad debts and the cost of administration and collection.

This rapid development of the laboratory service was temporarily slowed in 1956 and 1957 by the prolonged illness and death in July, 1957, of the Director, Dr. R. A. H. Mackeen. His vision and patient energy had laid the groundwork for the entire plan and the fine modern laboratories in Saint John, Moncton, and Fredericton, will remain as monuments to his devoted service.

At this time it was considered wise to have a reappraisal of the laboratory service and, fortunately, the services of Mr. James Gibbard were again available. Mr. Gibbard made a second comprehensive survey of the province during the autumn of 1957. His report reviewed and commented favourably on the progress made to date and recommended a continued expansion of the service along the lines inaugurated a few years previously. His report stressed particularly the desire of speeding up the extension of consultant services of both pathologists and senior technicians to the smaller hospital laboratories in each region of the province. In November, 1957, Dr. H. A. Bird was appointed as Director of Laboratories with Dr. I. A. MacLennan as Associate Director.

Policy and Operation

The laboratory service of the Department of Health and Social Services of New Brunswick is unique in that it provides most of the clinical laboratory facilities in the province in addition to all of the public health facilities. From its very beginning the Bureau of Laboratories was closely associated with an active general hospital and this association continues today in all of the laboratories. There is no evidence that this method of providing laboratory services was planned from the beginning but, in its early days, the Bureau of Laboratories was called upon to provide more and more clinical services to the Saint John General Hospital because there was no one else to provide them. This close relationship with the hospital was so satisfactory that it continued through the years with the result that a policy which was born of necessity has become firmly established. We believe that it is a good policy for this province. By developing a large central laboratory and strategically placed regional laboratories it has been possible to take full advantage of the Federal Health Grants in the construction of buildings, the purchase of equipment and the training of personnel. We have, to a large extent, avoided costly duplication of service. In those areas in which the laboratories have been developed first-class facilities have been made available to hospitals which in all probability could not have afforded to provide them independently. This process of expansion continues into all regions of the province. By virtue of its geographical characteristics and population distribution, New Brunswick can be

conveniently divided into six regions; in four of these the laboratory services are well established, in the fifth they are under construction and in the sixth they are planned for the near future.

Each regional laboratory, with the exception of the one in Campbellton, is situated in direct association with the largest general hospital in the area. Each laboratory provides a complete service to that hospital and to other hospitals in the same community. In these adjacent hospitals smaller laboratories are maintained for the performance of those tests which must be done on the premises but these are operated by the regional laboratory. The regional laboratories have not taken over the operation of hospital laboratories except in the towns and cities where these regional laboratories are situated. At the present time the service offered to more remote hospital laboratories is limited to the supervisory and consultant services of pathologists and senior laboratory workers and to the provision of standard reagents when requested. Of course, all referred work is accepted.

The Division of Laboratories is also vitally interested in the training of technicians within the province. An approved training school is operated in the Central Laboratory in Saint John. Two courses are offered. The first is open to senior matriculants and covers the complete field of clinical and public health laboratory work and prepares the student for the examinations of the Canadian Society of Laboratory Technologists. The second course is offered to selected high school graduates and is restricted to common clinical procedures. This second course is designed to provide an adequate supply of suitably trained technicians for the smaller hospital laboratories in all parts of the province. A third aspect of the training program provides for refresher courses at the Central or regional laboratories which are offered to any hospital laboratory technicians. Local hospital and medical authorities are encouraged to seek out suitable candidates for the training required to meet local demands. All of the above types of training are supported by bursaries.

Before the advent of government sponsored hospital insurance in July, 1959, a major revision of the unitage system was made. This took the form of a thorough study of the production cost of each laboratory procedure as it was performed in the three laboratories then in operation. We believe that the cost unit which was evolved from this study gives a true picture of the actual cost of doing the tests that we do in the volume in which we do them. This cost unit has as its foundation the technical work unit used by the Dominion Bureau of Statistics. This basic unit has been proportionately weighted, in accordance with standard accounting practice, by increments derived from the cost of materials, equipment and space used in each procedure and from general administrative overhead. Wherever possible the cost of equipment and materials used only in a specific test has been apportioned to that test alone. Appreciation is expressed for the expert service rendered by the accounting division of the Department of Health and Social Services in establishing this cost unit. This division also maintains accurate records of the numbers and types of all tests done by all laboratories. These records are readily available to the laboratories at all times.

The laboratory service is operated as a division of the Department of Health and Social Services and provides service at cost to public health

agencies, to hospitals and to the public through the out-patient departments of hospitals. At the present time certain out-patient procedures are insured and when these are done for insured patients they are charged through the hospitals to the New Brunswick Hospital Services Commission. The procedures on this insured out-patient list are those which are most likely to reduce the need for hospitalization. To date the policy has been to maintain the laboratory service outside the hospital insurance plan and to provide service to the plan at cost.

Above all it is the policy of the Laboratory Division and of the Department of Health and Social Services to bring to the people of New Brunswick a comprehensive service at the lowest possible cost. We believe we can do this best by continuing to develop an integrated system of laboratories, by providing consultant services to hospitals, by training technical and professional workers and by adopting each modern advance in technique that is suited to our needs.

Summary

An account of the history, development, organization and operational policy of the Laboratory service of the Department of Health and Social Services in New Brunswick is presented. This service is unique in that it provides most of the clinical laboratory services to the hospitals of the province in addition to all of the public health laboratory facilities. All clinical laboratory services are provided at cost to the hospitals. The consultation services of pathologists and senior laboratory workers are offered to any hospital. The Division of Laboratories maintains a comprehensive training school for technicians. The types of training offered are designed to suit the particular needs of this province.

A system of cost units has been devised in an attempt to render an accurate accounting of the cost of this service and of each individual test. The general policy of operation of the service has also been presented.

Sommaire

L'exposé qui précède résume l'historique, l'organisation, l'expansion et le mode de fonctionnement du Service de Laboratoires du ministère de la Santé et des Services Sociaux du Nouveau-Brunswick. Ce système est unique et son genre vu qu'il fournit la plupart des services cliniques de laboratoire aux hôpitaux de la province, en plus des services de laboratoire pour la Santé publique. Tous les services cliniques de laboratoire sont disponibles au prix coûtant aux hôpitaux. De plus, les pathologistes et employés supérieurs des laboratoires offrent un service de consultation aux hôpitaux. Un programme de formation des techniciens complète le Service de Laboratoires et la formation donnée répond spécifiquement aux besoins de cette province.

Un système d'estimation du coût par unité a été mis à point afin d'établir une comptabilité précise du coût d'ensemble ainsi que de chaque épreuve de laboratoire.

Mental Health Aspects of a Public Health Program[1]

A Panel Discussion

CHAIRMAN'S REMARKS

H. W. HENDERSON,[2] M.D.

DURING the past few years numerous articles relating to the mental health aspects of a public health program have appeared in professional journals of public health and psychiatry. As reflected by these articles, many psychiatrists have recognized the value of public health principles and practices, and are anxious to bring these resources to bear on mental health problems. It is equally apparent that public health workers are directing more and more attention to mental health problems and are asking for assistance in dealing with them. Psychiatrists have been hampered in their efforts to prevent and treat mental disorders by the gaps in our knowledge and understanding of these illnesses. Certain basic principles have emerged, which are fundamental to an understanding of human behaviour, principles which could and should be applied far more widely today than they have been.

There are many mental health problems that require our urgent attention. The steadily increasing number of patients admitted to our mental hospitals, the pressures and demands for the services in our mental health clinics, in addition to all the problems directed to the public health department and to the other helping services in the community, shout this message to us. I am convinced that we cannot expect to resolve these problems by increasing the number of mental hospitals and clinics. Additional diagnostic and treatment services are required, and I am confident they will be provided, but we must also work out new ways of dealing with some of these problems.

MENTAL HEALTH IN INDUSTRY

J. H. BAILLIE,[3] M.D., D.P.H.

The occupational or industrial setting is an important environment to many people at some stage of their life, usually during their most productive years. This environment will either provide the individual with the motivation, the opportunities to be productive and feel useful, the opportunities to co-exist

[1]Presented at the tenth annual meeting of the Ontario Public Health Association held at the King Edward-Sheraton Hotel, Toronto, September 28–30, 1959.

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successfully with his fellow man and derive so-called job satisfaction, or the industry will not provide this type of environment. It is primarily the responsibility of the individual to grow and mature in the environment in which he finds himself and to make best use of the opportunities that are available. However, if opportunities are not available, then it is also his responsibility to move on, if possible, to places where the opportunities he requires are available.

In recent years, management, particularly in larger firms, has realized that the company as well as the employee has a responsibility in health maintenance. To maintain good mental health it must successfully provide the leadership and the environment which will produce the motivation and goals necessary to get the best out of each individual. Industries which list the employee as one of the main assets of the company usually succeed in providing the kind of atmosphere that is necessary for good mental health. On the other hand, industries which list the employee as an expendable item do not succeed as well. Most firms now realize that a healthy work force is a productive and efficient work force and that health is both physical and mental. To meet their responsibility, many firms have embarked on management training plans designed to improve the skills of management people in leadership and in their ability to understand and help their fellow employee. This might be termed by my psychiatric friends as pseudopsycho therapy and an infringement on their field, but it is obviously only the application of basic mental health principles to a group. The industrial medical department's role in such a program is to provide staff assistance to management in the handling of their problem cases, to encourage or actively participate in the management training program by discussions on an individual case work method and by group discussions about such problems as absenteeism, the problem worker, alcoholism and others. I should hasten to add that it is of little use for industry to provide a good environment or a competent medical staff if the employee does not wish to accept the responsibility of acting as an adult in the work environment. Consequently, both the medical department and industry have a further role and responsibility and that is to make sure that the employee understands that the assistance being offered is aimed at improving behaviour, not aimed at supporting poor behaviour, and to this end a certain amount of good healthy discipline is wise. I use this word rather warily because in some circles it has taken on a rather nasty connotation. I am referring to self discipline as the ultimate goal in good mental health.

Whereas mental illness is the preserve of the psychiatrically trained professional worker, mental health is the responsibility of everyone and it behooves us all to increase our skills at getting along with one another if this society of ours is to survive. To attack this huge problem as we see it in industry, many people other than psychiatrists have to be trained in the simple art of showing genuine interest and providing a listening post for the fellow worker who is temporarily disturbed. This is all very well for big industry but what about the thousands of small industries which employ a relatively small number of employees? Here is where I think the public health group has a real challenge. The Kitchener project which was started by the Division of Industrial Hygiene and the Provincial Department, designed to

provide medical consultation services to small industry, succeeded in large part because of the interest and work of the provincial and local health departments. A similar type of interest by other health departments could produce equally good results. A large part of our society is rapidly becoming industrialized and if the many resulting small industries are to receive proper preventive medical advice, I can think of only one organization capable of providing this service and that is the public health department.

This does not necessarily mean the actual provision of services although I am not too sure this is so far out in left field, but I do mean the encouragement, stimulation, and provision of staff advice to small industries which might pool their financial resources for the provision of some form of professional assistance. We have found, for instance, that public health nurses are by and large, adequately trained to handle the problems of health in an industry and with very little additional training become quite competent in the problems of mental health. Society has now arrived at the point where we feel it is necessary to provide parents with staff advice regarding the rearing and mental health of the student body and I hope it would not be long before the public authorities saw, as part of their job, the provision of professional health maintenance advice to industry. As an added prediction let me say that, as I believe there is no better place to practise public health than in industry, the public health department which embarks on such a program would add greatly to its own job satisfaction and mental health.

THE CHANGING ATTITUDE OF THE COMMUNITY TOWARDS MENTAL HEALTH

EDWARD J. ROSEN,[4] M.D.

Public opinion and public demand are pressing for a broader mental health program. This is partly due to the fact that the traditional public health program in its educational aspects has done an effective job in teaching the value of promoting and preserving health and preventing ill health. People have learned this lesson as it concerns the physical aspects of health and, since they have understanding of the nature of man as a whole person, they have responded to the mental hygienists and are now asking that professional workers in public health and mental health do something about the widespread prevalence of disturbed children and neurotic and psychotic adults in our communities. I believe that the force behind the mental hygiene movement is now coming from the community itself, not from the handful of devoted individuals in medicine, nursing and social work.

An example of this force is the work accomplished by the Parent's Association for Mental Retardation in just a few years in this city. The Parent's Association raised close to half a million dollars and is operating a school for children with an I.Q. of less than 50. The parents of children with an I.Q. under 50 isolated their problem, banded together and organized a school program that previously had been lacking in the community. The parents of

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children who have emotional difficulties show their readiness for guidance and treatment through the fact that all the children's clinics have long waiting lists. More evidence of this request for help is to be found in the Annual Report for 1958 by Dr. Clare Robinson, Psychiatrist of the Department of Public Health, Toronto: "The attitude of Toronto people toward mental illness is changing perceptibly. It is noted now that parents call more frequently about their children asking for help with their emotional or behavioural problems or with their slow school progress. Last year an appreciably larger number of pre-school children were referred for behaviour problems." At the Child and Adolescent Out-Patient Department of the Toronto Psychiatric Hospital we require of all families who wish to refer themselves for service, that they inform their paediatrician or family doctor and have him make the referral. We are often met with the reply that they have tried to have him arrange such a referral but he has either refused or discouraged them, and now, after a lapse of time, they wish to come on their own.

Does organized public health have anything to offer in a mental health and mental hygiene program and if so, what is it, and how should it be administered? I would answer that we have a great deal to offer and it is not complex or beyond the scope of comprehension of the ordinary citizen. The simple principle of good physical health is the presence of a wholesome physical environment, that is, proper sanitation, pure food, adequate diet and protection from exposure to pathological conditions. The principle for good mental health is not too different, namely, that for optimum mental health and personality development, a wholesome emotional environment is essential. We are not suggesting an environment entirely free from anxiety, personal conflict, hardship and adversity, any more than one would recommend a completely aseptic physical environment. What we do know is that a pathological emotional environment can warp a personality and can destroy it, as effectively as tuberculosis can destroy the lung tissue.

The essentials in a public health mental hygiene program would be to anticipate and identify pathological and emotional conditions and symptoms, and either ameliorate the situation or refer the case to a clinic or agency for more involved investigation and treatment. In the pre-natal clinics and services, just as the mother is helped in preparing for the physical needs of the expected infant, she can be helped in preparing a healthy emotional climate for her child. There is much known about the anxieties of pregnancy, of what make for attitudes of rejection of the infant on the part of the mother, the father, the other siblings, and that these anxieties may be relieved by either the doctor or the nurse by simple techniques. In the first five years there are problems of how much or how little care and attention to give a child, the changing needs of the child regarding food, sleep, discipline, independence, as well as the specific individual strengths and weaknesses in the child which may require careful consideration and attention. The first child and the early years of childhood may be a very difficult and trying time for the mother who has the full burden of care of the infant.

Let us take as an example the problem of mental retardation in the first five years. The incidence in the normal population is given as 3 per cent, but the reported prevalence is very low in children below 6 years of age and rises

steadily to age 10. The prevalence study of the Onondago County, New York State, Department of Mental Hygiene, states that the reported number of below par individuals in the pre-school group is small, and increases with school-age group and becomes a maximum at early adolescence. The figures are as follows:—Under one year—2 per 1,000, 1 to 2 years—4 per 1,000, 3 to 4 years—6 per 1,000, 5 years—22 per 1,000, 6 years—40 per 1,000, rising to 10 to 15 years—80 per 1,000.

In the children's psychiatric clinics we are well acquainted with the results of this situation. The child is brought to the clinic with various personality and behavioural disturbances at the age of 8 or 9 years. This retardation has either not been recognized or has been denied. He has been under constant pressure of parental expectation to reach a level of performance beyond his capacity and as a result has faced constant failure. The burden of feelings of inadequacy, inferiority and rejection are beyond his endurance and the symptoms are those of personality disintegration. Early recognition and good family counselling could prevent this mental disorder.

With regard to the question "How should the service be offered by a public health department?", the answer is—in a program not too different from what is being done at the present time. I am aware that much of what I have been talking about and suggesting has already been done by the public health nurses to the degree that they are interested in patients and in their understanding of human beings, as well as part of a conscious mental hygiene effort. The public health nurse in various clinics and in home visiting would be the effective agent of a public health program in mental health. The mental hygiene program could be greatly strengthened in these levels by a consultant psychiatrist whose job would not be that of operating a psychiatric clinic, but of being available for consultations by the staff, not necessarily seeing the patient, unless this seemed indicated. The psychiatrist would contribute to staff training and community educational programs as well as to staff consultations. Such an appointment would not require a full time psychiatrist and in practice one would be much more likely to fill a post of a part-time than a full time psychiatrist.

THE PUBLIC HEALTH NURSE

BERNICE SEEDS,[5] REG. N.

Two comments are frequently heard concerning public health nurses and mental health programs. The first comment is that public health nurses should participate in mental health programs; the second is that public health nurses are not qualified for such participation.

My reaction to these comments is that public health nurses have been participating in these programs for some time. In all public health nursing work whether in the area of maternal and infant care, child health centers, school, industry or in the care of the sick in their own homes, are not public health nurses trying to help people adjust to life experiences? To put it in

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another way, are not public health nurses trying to prevent "the poor integration of life experiences which leads to a weakened personality structure which is prone to break down"? Public health nurses are engaged daily in the prevention of mental illness.

What about the public health nurse's work with persons who, she suspects, need psychiatric care or with persons who have returned home following treatment? She is doing exactly the same type of work in these areas as she is doing with persons suspected of tuberculosis or returning home following treatment of tuberculosis. She tries to get the patient under medical care and in the second instance she tries to support the patient and his family following treatment. Her aim is the same whether the diagnosis is tuberculosis or mental illness, that is, to assist the patient to take his place in the community once again.

Public health nurses are already participating in a program for mental health. I feel that the question should be rather, how can public health nurses improve their participation? There are two aspects to this improvement, one is the quantity of participation and the other the quality. The quantity is mainly in the area of the rehabilitation of the mentally ill and, as the next speaker will discuss this, I will discuss the second aspect, that is, the quality of participation. This leads me to the second comment which is commonly made that public health nurses are not qualified to participate in mental health programs.

This statement may have had some validity in the past but nurses are now being taught, in their basic training, more and more about all aspects of mental health and mental illness. Psychiatric affiliation is accepted as a necessity and where facilities are available nurses are being given this affiliation. Public health nurses who did not have these opportunities during training can be given and are being given help through staff education programs. More than this is required, however, if the service given in the area of mental health is to meet the high standards which the community has come to expect in the other aspects of public health nursing programs. Consultant service must be made available to public health nursing staffs. A consultant not only strengthens the quality of service given but also tends to make us more aware of the opportunities for this service. Consultant service is especially important in a mental health program because of the magnitude of the problem that must be tackled. There is such a great need that decisions will have to be made in setting up priorities in the use of the nurses' time and here a consultant could offer guidance.

Nurses also need someone to whom they can turn with problems which arise from day to day, someone who not only has specialized knowledge in the area of mental health but who is also familiar with all aspects of public health nursing. I would suggest that a public health nurse with additional qualifications in mental health would be the best person. Consultants in mental health, who have had training and experience in public health nursing, are employed at state and local levels in the United States and seem to be filling the need for this type of service.

In conclusion, I would like to re-emphasize that all areas of public health nursing have mental health aspects. Public health nurses are actively parti-

cipating in the prevention of mental illness and could participate to a greater extent in the rehabilitation of the mentally ill. In order to strengthen participation in mental health programs, two major changes are required: first, closer working relationships between hospitals and public health organizations, and second, provision of consultant services to public health nursing staffs.

TEAMWORK IN MENTAL HEALTH

R. A. KENNEDY,[6] M.D.

In correlating programs in mental health there often arises the problem of co-operation between psychiatric and public health workers. The former give lip service to the activities of nurses but seem to have a poor opinion of the usefulness of such activities in the field of mental health. The nurses, on the other hand, are very often frustrated by the reports they receive from mental health clinics. The wording is difficult to interpret and when put into plain language often seems to have little bearing on the domestic handling of the problem patient.

To solve this problem the Director of one of the mental health clinics in Ottawa offered to meet with the public health nurses for half a day a month. These meetings were attended by the director and his psychiatric social worker and by a few nurses who had current problem cases; some of these had already been seen at the clinic, some were discharged from Ontario Hospitals, and some were cases which the nurse was doubtful about.

It was most interesting to watch the relationship that developed between the clinic team and the nurses. Quite quickly what had started as almost overt mutual suspicion changed to something like mutual admiration. The nurses realized that the psychiatrists really are experts, know what they are talking about and can, when pressed, use everyday words. The psychiatric members, for their part, decided that public health nurses are useful creatures and can in many instances act as a reliable extension of clinic services, both in screening and follow-up.

This demonstration was so successful that I have no hesitation in recommending similar meetings to any health department which has not already inaugurated such a system.

WHY IS AFTER-CARE NECESSARY?

C. A. CLELAND,[7] M.D.

When a patient comes to a mental hospital many miles from his home, it is often against his wishes, and he frequently feels that he has been torn out of his rightful place. Fear of mental hospitals is still quite real although in a modern hospital these fears are allayed in a very short time. The patient's relatives share those fears and are torn between a desire to see the patient and a fear of the "snake-pit" environment. A few visits are generally sufficient to

[6]Medical Officer of Health, City Hall, Ottawa.
[7]Superintendent, Ontario Hospital, St. Thomas, Ontario.

dispel the fears of the relatives. A modern mental hospital presents a therapeutic environment and presents medical and socializing therapies in a sympathetic and understanding manner. In hospital, the patient has no responsibilities and is not criticized or censured.

It is understandable that, when he returns home, he will be apprehensive about how his neighbours, acquaintances, employers, and fellow-employees, will accept him, particularly if he had shown some dramatic or belligerent behaviour prior to his admission. We try to make sure that his immediate family understands and accepts him prior to his probation. In the home environment he needs support and encouragement. For this, he has his family and his family doctor. In a few areas, there are specialized social agencies which can give real assistance, and occasionally the clergy can give much needed support.

There are many convalescents who need other help. We asked if public health personnel could aid these people, and we were gratified with the enthusiastic interest shown and with the willingness to help. The public health nurse has an entree to every home, is respected and trusted, knows intimately the resources available in her community, and is the ideal person to counsel, advise, and support these individuals.

The Ontario Hospital, St. Thomas, began in May 1957 a pilot project for after-care of patients who lived far away from the hospital. The hospital is 125 miles away from the largest urban center which makes it impossible for hospital staff to visit convalescent patients at their homes. We found that medical officers of health and public health nurses had a considerable interest in convalescent patients in their community. An "orientation" course of 3 days at our hospital was devised and we have now given 9 such courses, attended by 118 persons, mostly public health nurses, but also some industrial nurses and social workers in our area. The nurses see how a patient is admitted, treated, and discharged.

A referral system was agreed upon which operates as follows. The day after admission of a patient, a letter is sent to his family physician, advising him that we can arrange to have a public health nurse visit the family, and the patient when he returns home. We ask the physician to let us know if he does not wish this service. In two weeks, a preliminary report and a referral form are sent to the family physician, with a copy to the medical officer of health. Here, we may ask for specific information required for diagnosis or for rehabilitation plans. If we feel that a home visit by the public health nurse would serve no useful purpose, this is also indicated on the form. The conference report is sent to the family physician and the medical officer of health. When the patient has gone home, the "Follow-up" form is sent to the family physician and to the medical officer of health, listing treatment given, prognosis, and our recommendations.

The public health nurse can visit the patient without any stigma being attached, and she can help the family to accept and understand the patient's illness. She can direct the family, and the patient, to social agencies, employment agencies, etc., when necessary. She can encourage the patient to visit his own physician who often will oversee medication begun in hospital. She can encourage and support the patient and his family. She also helps other

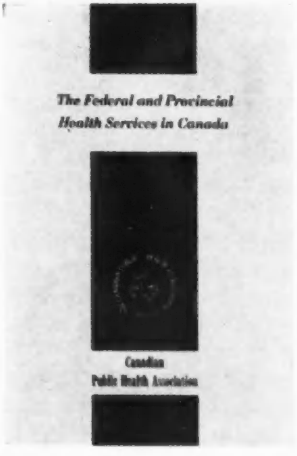
members of the community realize that mental illness is simply another sickness that is curable.

We have found that about one in three of our patients will require visits by the public health nurse. Many of these will require one visit only, others will require regular visits over a period of months. It is interesting that the public health nurses have already known about one third of the families of mentally ill patients prior to the illness.

Similar plans have been reported from Monmouth County, New Jersey, where social workers and public health nurses operate an integrated plan of after-care for State Hospital patients. Another study was reported in the September, 1959, issue of "Mental Hospitals"—from the Carrier Clinic, Belle Meade, New Jersey. This article emphasizes how necessary it is for the individual doing after care (whether a public health nurse or a social worker) to know thoroughly the social structure and social resources of the community to which the patient returns.

There is still further advance reported from Nottingham and Lancaster in England, which is somewhat similar to the Amsterdam plan. The patient is seen and his relatives and his home are visited by the psychiatrist, who, whenever possible, works out a home-care plan, or a day-care or night-care plan under relatively good psychiatric and nursing supervision, with the help of the district health officer and his staff. This undoubtedly relieves the mental hospital of many of the emergencies that are cared for in a psychiatric hospital in Canada. Certainly, this plan would simplify after care as the patient has not been removed from his community. The aid this plan would give to removal of the stigma of mental illness is tremendous.

The Federal and Provincial Health Services in Canada



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Available from the National Office, Canadian Public Health Association, 150 College Street, Toronto 5, Ontario.

The Area Program for Brucellosis Control[1]

THE increased use of pasteurization practices has greatly reduced the possibility of brucella infection in man. As long as infected animals remain as a reservoir, however, there will always be an occupational hazard to the public, particularly to rural persons engaged in farming. Recognizing this hazard to the public health, a program designed to reduce the economic loss to livestock producers and to maintain export markets was introduced in 1957 by the Health of Animals Division, Canada Department of Agriculture. Prior to this date, bovine brucellosis had been controlled on an individual herd basis, supplemented by calfhood vaccination programs.

Methods Employed

Blood samples are collected by veterinarians or technicians working under veterinary supervision from all susceptible cattle in the herd. Blood samples are not collected from calves under eight months, spayed heifers, steers, and official vaccinates up to thirty-six months of age.

The serum agglutination test is employed, and all testing is done at federal testing laboratories. Using a standard antigen prepared by the Health of Animals laboratory, and a uniform procedure of interpretation, cattle giving a positive titre of 1:100 are identified and ordered slaughtered as reactors. In officially vaccinated cattle, the diagnostic titre used is 1:200. Cattle are recognized as "officially vaccinated" when they have been vaccinated with B. abortus Strain 19 vaccine at not less than four months and not more than eleven months after the date of birth. Only vaccines of approved potency are permitted to be used in Canada. Officially vaccinated animals up to thirty-six months of age are excluded from the first herd test. Where infection is detected, samples are collected from officially vaccinated calves over twenty-four months of age.

Reactor animals are identified with a distinguishable, red reactor tag, valued by the federal veterinarian, and ordered to be slaughtered either under his supervision or at an establishment under Federal Meat Inspection. Following the removal of reactors from a herd, the premises are cleaned and disinfected, and the herd retested at regular intervals until negative.

In areas where the test has been completed, the brucellosis milk ring test (BRT) is being utilized to test all milking herds semi-annually. Herds which react to the BRT are subsequently blood tested.

Vaccination

Under the Federal-Provincial Calfhood Vaccination Program, established in 1950, the provincial departments of agriculture assumed the responsibility of distributing B. abortus Strain 19 vaccine, supplied free of charge by the

[1]Contributed by the Health of Animals Division, Canada Department of Agriculture, Ottawa, Ontario.

federal government. In addition, the provinces supply identification ear tags and certificates. The program has established a uniform procedure for calfhood vaccination throughout Canada. Last year, 1,044,566 calves were vaccinated in Canada, and, since inception of the program, close to 6,000,000 calves have been vaccinated.

Calfhood vaccination in itself could not accomplish complete eradication of this disease. It is a valuable aid in controlling brucellosis and will continue to be used to supplement the Brucellosis Control Area Program.

Progress

As of March 31, 1960, 107 areas have been Certified, and testing is under way in 134 areas. Areas in which the level of infection does not exceed 1% of the total cattle population and 5% of the herd population are designated as certified for a period of three years. Over 3,000,000 cattle, estimated to represent 27% of Canada's cattle population, are either in Brucellosis Certified Areas or in areas where testing has commenced.

BRUCELLOSIS CERTIFIED AREAS
Since Inception (1957–58) to March 31, 1960

Prince Edward Island	3
Nova Scotia	13
New Brunswick	12
Quebec	8
Ontario	19
Manitoba	10
Saskatchewan	37
Alberta	—
British Columbia	4
Yukon	1

BRUCELLOSIS CONTROL AREAS
Since Inception (1957–58) to March 31, 1960

Areas Accepted	411
Areas Completed	147
Areas Certified	107
Areas under Test	134
Untested Areas	170
Cattle under Supervision	3,143,696*

*Includes all cattle in Certified Areas and in areas where testing has commenced.

The level of infection has been less than was anticipated. Results to date indicate that approximately 8.5% of the herds are infected, and, on a herd or animal basis, 1.3%. Over 37,000 reactor animals have been identified and removed for slaughter. There are extremes, of course, within these average figures of infection. It has been observed that low levels of infection in some areas are attributed to testing programs conducted by provincial governments prior to the commencement of the National Brucellosis Control Area Program.

The program is being well received by livestock owners. A goal for its completion has not been set, and progress will be determined largely by the available veterinary manpower which can be engaged. The accomplishmenst during the last three years have indicated, however, that bovine brucellosis can be eradicated in Canada.

Canadian Journal of Public Health

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DR. EDWARD J. YOUNG APPOINTED EXECUTIVE DIRECTOR OF THE ASSOCIATION

IT IS with great pleasure that the Association announces the appointment of Dr. Edward J. Young, D.P.H., as Executive Director. Dr. Young will assume his new duties on October 1st.

Graduating in medicine from the University of Toronto in 1932 Dr. Young chose a military career, being commissioned in the R.C.A.M.C. At the outbreak of the war he became Senior Medical Officer with the R.C.A.F. at Camp Borden, proceeding overseas in February, 1940. He organized and commanded the first convalescent hospital to be formed in the Canadian Army overseas. In 1944 he commanded the first Canadian General Hospital, in Italy and subsequently in Holland, later being in command of the Canadian General Hospital at Taplow, England.

On his return to Canada he engaged in post-graduate studies in the School of Hygiene, University of Toronto, receiving the Diploma in Public Health. He was then appointed Assistant Medical Director in charge of hygiene and sanitation at Army Headquarters. From 1950 to 1954 Dr. Young was Command Medical Officer at Eastern Army Command and with the outbreak of war in Korea he proceeded overseas as Senior Medical Officer of the Commonwealth Division. Returning from Korea he was appointed Command Medical Officer of Eastern Command, taking an active part in the medical arrangements for the large military camp at Gagetown, N.B. In 1957 he was seconded from the Department of National Defence to the Department of National Health and Welfare becoming Chief of the Federal Emergency Health Services Division. Provincial and municipal health leaders in the various provinces are familiar with the leadership of Colonel Young in the provision of emergency health services. Dr. Young has contributed to various journals a number of articles relating to military hygiene and public health services.

The responsibilities of the Executive Director will include the further development of the work of the provincial branches and affiliated associations, and the establishment of a consultative public health service available to public health authorities across Canada with the co-operation of qualified specialists in the various fields of public health.

The voluntary services of its members, contributed so generously in the past in committees, in the conduct of studies and in the various offices of the

Association, will continue to be the strength of the Canadian Public Health Association. The new Executive Director will provide valued leadership but the work of the Association must be accomplished by its members. The Association is fortunate that the Honorary Secretary, Dr. G. W. O. Moss, and the Honorary Treasurer, Dr. Wm. Mosley, will continue to contribute invaluable services in their respective offices.

The members of the Association extend to Dr. Young a hearty welcome and the assurance of their whole-hearted support.

THE ADVISORY EDITORIAL BOARD OF THE JOURNAL

AT the recent annual meeting in Halifax the Executive Council gave unanimous approval of the report of the Editor of the Journal. This report made two important recommendations. One proposal related to the appointment to the Advisory Editorial Board of a representative from each provincial branch or affiliated association and the other to the appointment of an Associate Editor in the Province of Quebec.

The new members of the Advisory Editorial Board will make possible a closer link with the provincial associations. The section of the Journal *Association News* will become of special importance as reports and news of each of the provincial associations will be furnished regularly by their appointed representative. These members will have the opportunity of making a most important contribution to the Association as a whole, as well as to their own provincial associations. The success of this section of the Journal will depend on them. They will be concerned with the publication of papers presented at the annual meetings of their provincial associations and also papers of public health interest presented on other occasions.

The appointment of an Associate Editor, resident in Quebec, is in keeping with the desire of the Association and the Journal to publish a larger number of papers from that province. As in the past, papers in French will customarily have a summary in English and papers in English a French summary.

It is particularly pleasing that Dr. Jules Gilbert of the School of Hygiene, University of Montreal, and the Ministry of Health, Quebec, has accepted the Association's invitation and that the Journal will have his most valued advice and assistance. Dr. Gilbert is known throughout Canada as an eminent authority and leader in the field of health education. As Director of Health Education in the Ministry of Health, he has developed a unique program in which public health nurses, with additional training in health education, provide leadership in the majority of the county health units. As professor in the School of Hygiene, University of Montreal, Dr. Gilbert has established courses in health education for medical officers of health, public health dentists and veterinarians, as well as making available shorter courses for teachers and other persons concerned with health education.

In Dr. J. T. Phair, who has served as Associate Editor for many years, and Dr. Jules Gilbert, the Editor has two able counsellors, both of whom are past presidents of the Association and are intimately familiar with all aspects of public health in Canada.

A School Health Service in a New Ontario Health Unit

Report of Second Year[1]

J. R. MAYERS,[2] M.D., B.S., D.P.H.

THIS article records the second year of a school health programme during which the most suitable programme for local requirements continued to be sought through changes in the approach.

In the school year 1957–58, the programme was based on public health nurses' inspections, frequent nurse visits to the schools, nurse-teacher liaison and referrals. The public health nurse service also included vision testing in kindergarten, Grades I, IV and VIII. Health examinations were offered to all children in kindergarten or Grade I; 79% of those eligible availed themselves of this service. In addition, regular sanitary inspection of the schools was conducted and the medical officer of health was available once a month at each of the three high schools in the county for private consultations with any student who felt he or she had a health problem to discuss.

In the second school year, 1958–59, children in kindergarten or Grade I (school starters) and Grade VIII were offered a clinical examination by the medical officer of health if the parents thought that the child had a health problem.

They were asked to make this request on a special consent form. The object was to eliminate routine medical examinations and to try parent, teacher, and public health nurse referrals as a screening. Out of an enrolment of 1,739 children in these grades, only 556 parents and children, and 128 children whose parents did not attend (total, 684, 38.2%) availed themselves of the offer. This was less than one-half the number that so availed themselves in the previous year.

In addition, an audiometry survey was carried out on all pupils of Grades VI, VII, and VIII, comprising 3,038 children. Only 25 had an audio loss of 30 decibels or more in the frequencies 1,000 to 3,500 (the hearing range). Parents were informed and a copy of the audiogram was sent to their physician. Other features of the 1957–58 school programme were the same as in 1958–1959. Possibly more stress was laid on the giving of addresses to the home and school associations and teachers' groups. In analyzing the findings, the parents' statement of the pupil's health problem agreed with the clinical findings in 268 instances.

The parents' statements of child's health problems did not agree with the clinical findings in 285 instances. The total number included in this figure the clinical defects in 128 pupils who were examined without the parents present or their comments regarding the child's health. The total was 681.

DISCUSSION:

1. In two years, two to three thousand specimens of urine were tested in the schools for sugar and albumen from children ranging from 5 years to 12 or 13 years. No positive sugar tests have been found and the albuminurias were on further examination found to be of no significance.

2. Parents seem to prefer a routine physical check, not pre-screening by themselves and the figures appear to bear this out, as of the parents, 268 stated on the form that a health problem existed and 285 did not. Of the latter more than 50% were wrong. It was also disappointing to find that the teachers noted gross sub-health states, but often missed less marked ones, and hearing and visual defects, and in fact, the number of referrals from the teacher source was quite disappointing. During

[1]Author—Canad. J. Pub. Health, 1959, *50*:217.

[2]Director and Medical Officer of Health, Norfolk County Health Unit, Simcoe, Ontario.

this second year there was a long time-gap between informing the parent that there would be a health check and their receiving the appointment. This was in addition to the fact noted above that the parents seemed to desire a free physical examination of their child and the statement "Health Problems" seemed to deter some of them. Although it would appear that there had been a fall-off in response of the part of the parents, this was not completely valid as the parents were as enthusiastic as ever and eager to make use of the school health service, and the percentage drop is very likely, in fact, almost certainly due to the introduction of Grade VIII medicals and the method in which the appointments were sent out for the Grade VIII's, who on the whole did not themselves wish to be examined and felt quite strongly on the subject.

3. It was originally thought that the 1959–1960 recorded results would be even smaller since the health unit has completely divorced immunization from the schools and from the well-baby clinics but this is not so and in fact more parents accepted physical examination and more attended. In fact, to date on part of a year more than 1,000 children in the previously mentioned grades have attended for physical examinations. We feel that the reasons for this are: (*a*) The parents are informed and an appointment is given in a very short interval of time, (*b*) Instead of giving Grade VIII appointment slips to the children themselves to take home, they are mailed directly to the parent, and the child has no opportunity to destroy the slip or talk the parent out of the situation, which is what we suspect has been happening.

4. The observations of the last two years seemed to indicate again that the largest group of defects did not need a medical officer to detect them, namely, defects of teeth, refractive errors, speech defects, emotional instability and retardation. These could obviously all have been identified by parents or teachers.

5. After conference with the principals of the high schools in the county a programme was agreed upon for the year 1959–1960, which has been implemented in 1960. It includes weekly or bi-weekly public health nursing visits by a public health nurse who confines her activities to the high schools; referrals of children to public health nurses; referrals by the public health nurses to the medical officer of health; vision and audiometric testing of all students in Grade XI; colour vision testing, which is carried out by the school health instructors; and health talks given once a month to classes in physical education and health (these were considered to be in the nature of discussions in groups rather than formal lectures and of an experimental nature). Owing to various factors these talks have not yet materialized. Because of the absence of the public health nurse looking after the high schools in 1960, only 63 pupils were counselled by her and in her opinion none needed further counselling or examination by the medical officer of health. In Grade XI vision tests of 194 students were carried out and 19 defects were located, 9 of which were subsequently corrected: 332 audiometric tests were carried out and 4 hearing defects were found. It is certainly a serious failure of the health and educational systems that visual and hearing defects should be located for the first time at the age of about 16 or 17.

Conclusions:

1. There is considerable scope for teacher-child health education which is not being adequately covered either in the teachers' colleges or by the Department of Health.

2. The value of parents' conclusions regarding their child's state of health is not very great as there are many defects which are not noticed in the home.

3. It appears, as is confirmed in literature, that there is considerable waste of medical manpower in carrying out routine physical examinations in the school.

4. A physical examination of a child in the absence of the parent, even though the child may be 12 or 13, is not very productive of useful information because although the parent apparently tends not to write down physical health or mental health she will often, if not always, bring these points up in discussion while the child is being examined.

5. Health education of the public school teacher is a very pressing and vital need. In addition, when children are being examined in the school, it is extremely desirable to have the class teacher present or the health instructor as well as the parent.

The Canadian Public Health Association Annual Report

PART III

1959-1960

REPORT OF THE COMMITTEE OF THE CERTIFICATION OF SANITARY INSPECTORS

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A REPORT of the Committee on the Certification of Sanitary Inspectors was first presented to the Executive Council in June 1933. To permit the certification of sanitary inspectors the Committee assumed administrative responsibilities as well as continued study of the qualifications, including secondary school education. Throughout the years the Committee has been concerned with the training and qualifying of candidates. To assist in training a manual for sanitary inspectors was introduced in 1936 and the correspondence course was introduced in 1942. Examinations for the C.S.I.(C) were first held in 1935 and since then 1,210 candidates have received the certificate.

The certificate is recognized as an award of competency in the field of sanitary inspection. It is gratifying that the certificate is recognized throughout Canada and abroad.

The Committee has recognized that formal courses of instruction are essential and it is hoped that additional courses to meet the needs of all provinces will be developed. At present, two formal courses are provided, one in the School of Hygiene, University of Montreal, and the second by the Environmental Sanitation Training Centre in Toronto under the direction of the Department

of Health of Ontario. Also, a course of instruction extending over a period of nine months has been provided when needed in Manitoba, arranged by the provincial department of health.

Qualifications and training of all public health personnel are matters of first importance to the Association. The qualifications of medical officers of health, medical officers serving in specialized fields, public health nurses, engineers, veterinarians, health educators, laboratory personnel, statisticians, as well as sanitary inspectors, are the subject of study by the Committee on Professional Education under the chairmanship of Dr. James M. Mather. Subcommittees are functioning in the fields of health education and sanitary inspection. The Subcommittee on Sanitary Inspectors, under the chairmanship of Mr. A. R. Shearer, Vancouver, is reviewing the present qualifications. It has gathered the opinions of members of provincial and local departments of health concerning qualifications, training (including refresher courses) and certification. A progress report is included in the report of the Committee on Professional Education.

For the purpose of administration the Committee on the Certification of Sanitary Inspectors appointed in 1936 a subcommittee, known as the Central Board of Registration and Examination, to function for the Committee during the interval between annual meetings. Two members of the Board are also members of the Canadian Institute of Sanitary Inspectors. In this way, a close liaison is maintained with the Institute. The Committee as a whole is convened at the time of the annual meeting and the report of the work of the Central Board is presented by correspondence to the members of the whole Committee prior to the annual meeting.

Fifty-seven candidates were granted the certificate during the year. The Committee desires to express its thanks to the members who served as examiners and as members of the various provincial examining boards. A board of three members was appointed to prepare the written papers for the examinations. These members were Mr. Mark Flattery, Chairman, Dr. J. J. Stanton and Mr. R. Bowering. The Committee desires to express its thanks to Mr. Flattery for marking the exercises of students enrolled in the correspondence course. This course is conducted twice yearly and extends over nine and a half months.

A complete revision of the Manual for Sanitary Inspectors was undertaken which will be completed within the next year.

During the year the Central Board has held regular monthly meetings and has studied carefully qualifications, training, and certification of sanitary inspectors. The Board has presented its findings and recommendations to the whole Committee and has also presented these to the subcommittee of the Committee on Professional Education.

The Committee is appreciative of the valuable studies made by the Canadian Institute of Sanitary Inspectors regarding qualifications, training, and certification. Twenty-five years have elapsed since the qualifying certificate was first provided. Requests have been received on a number of occasions for the provision of additional qualifying certificates.

The following observations and recommendations are presented to the Executive Council by the Committee on the Certification of Sanitary Inspectors.

General Observations—Aptitude, Personality and Other Attributes

A preliminary orientation period in a health department is most helpful. Every effort should be made to give a clear picture of the work and duties of an inspector to the prospective candidate. In selecting candidates, it must be remembered that the work of the sanitary inspector relates to meeting people, giving to them essential information relative to the sanitary problems involved and persuading them to apply the knowledge. He must, therefore, be able to create good public relationships. A degree of maturity is essential and experience of several years in business or industry is very helpful. Candidates should be at least 21 years of age and preferably under 35 years. The Certificate will not be awarded to a candidate under 21 years of age.

Secondary School Education

The necessity for secondary school education is fully recognized. The present requirement is the successful completion of the equivalent of the Ontario Grade XII Secondary School Graduation Diploma of the General Course with chemistry and physics. A higher standard of basic education is advantageous to the candidate and the foregoing requirement should be regarded as minimal.

The following standings are accepted as the equivalent of Ontario Grade XII:

Alberta	Grade XI
British Columbia	Grade XII
Manitoba	Grade XI
Saskatchewan	Grade XI
Prince Edward Island	Grade XII
	First Class License
	Second Year Certificate from Prince of Wales College
Quebec (Catholic)	Grade XI—Catholic High School Leaving Certificate
	Certificat d'immatriculation
	Certificat lettres-sciences
Quebec (Protestant)	Grade XI—High School Leaving Certificate
	McGill Jr. School Certificate
New Brunswick	Grade XII
	Grade XI (Before June 30, 1952)
Newfoundland	Grade XI
Nova Scotia	Grade XI

In view of the divergent opinions concerning secondary school education requirements as expressed by the Deputy Ministers of Health, the Committee considers that for the present the equivalent of Ontario Grade XII Secondary School Graduation Diploma of the General Course with chemistry and physics should be required as the minimum.

Courses of Training

Formal courses are provided in Ontario and Quebec. The provision of a formal course serving British Columbia and the other western provinces would be desirable.

Continuation of the correspondence course for candidates in provinces other than Ontario and Quebec is desired by the Deputy Ministers of Health of these provinces. Revision of the course was made in 1959 and additional material is being included in the present course. The correspondence course covers a period of nine months during which time the candidate must be employed in a health unit or health department and receive definite supervision. Candidates are required to prepare reports in various fields of work.

During the past year the Manual for Sanitary Inspectors has been revised and considerable material has been added. The Manual should not be considered as a textbook but as a general guide in the subject of sanitary inspection. It must be supplemented by textbooks in the field in accordance with the requirements of the syllabus.

Refresher Courses

Refresher courses are of great value and should be part of in-service training. These courses may be provided through provincial departments of health or universities as has been done in several provinces.

Provision of Certificates

It is felt that in addition to the present certificate (C.S.I.(C)) a senior certificate should be provided. It is recommended that this certficate be—Sanitarian (Canada), (San.(C)). The requirements for this certificate would include acceptable service for a definite period of years, conduct of a study and the preparation of a report relating to a field of special interest to the inspector and appropriate examinations. The Committee believes that this senior certificate would provide an incentive to inspectors who are truly interested in their work and the enhancement of their knowledge and skills and who might well have evidence of their senior status. This higher qualification would assist in the supplying of trained inspectors who would serve as supervisors or senior inspectors. Both certificates are to be considered solely as certificates of competency.

REPORT OF THE COMMITTEE ON PROFESSIONAL EDUCATION

Dr. James M. Mather, Chairman
Miss Ruth M. Morrison, Secretary

THE ACTIVITIES of the Committee on Professional Education have, during the past year, been confined to two areas. The first interest has been a continuation of the study begun last year into the training and standards for sanitary inspectors. Mr. A. R. Shearer, formerly Assistant Director of Laboratories, Health Branch, Provincial Department of Health Services and Hospital Insurance for British Columbia has assumed the chairmanship of that ad hoc sub-committee. The second area of investigation has been the training and standards for public health educators. Mr. Raymond H. Goodacre, Director, Division of Public Health Education in the Provincial Department of Health, has acted as chairman of that sub-committee. An attempt was made to activate a further sub-committee to investigate standards and training for public health statisticians, but this did not prove to be feasible.

In neither area studied are we, as yet, ready to make firm recommendations. In both cases we feel that further study is needed and, at the present time, we can make only observations and a summary of our findings to date.

Sanitary Inspectors

This is an exceedingly complex study. The sanitary inspector in Canada has gone through a period of evolution which is not uniform throughout the country. In some areas, the services and standards of education demanded of him are still on a relatively elementary level while in other areas considerable technical training, experience and skill are necessary if he is to carry out the duties and responsibilities assigned to him. There is no uniformity of opinion among employers as to the training necessary. There is a very evident desire among the sanitary inspectors for improved basic and continuing educational opportunities.

There are actually two committees of the Association concerned with the training and standards for sanitary inspectors; the Committee on Professional Education and the Committee on the Certification of Sanitary Inspectors. These two Committees have worked closely together but the sheer physical distance of separation has made it most difficult to completely correlate their efforts. It has been suggested during the year that the two committees might make a joint report to Council but this has not proved to be possible. Actually, at this stage, it may be more desirable to have separate reports presented, since we do not feel that we, as a committee, have reached the stage where we would like to have our report considered as final recommendations to Council. Rather, we would prefer at least another year to elapse before we attempt to be definite and firm in our findings.

A number of meetings of the local sub-committee were held during the year and it is felt that considerable progress was made. A statement of specific objectives for further study was enunciated as follows:—

1. That the academic requirement for applicants for training should be a successfully completed Senior Matriculation Certificate including as compulsory subjects:—
   (a) any two of algebra, geometry or trigonometry,
   (b) any two sciences,
   at the senior matriculation level.
2. That "Requirements for Study" should be prepared by a joint committee of the Canadian Public Health Association (C.P.H.A.), and the Canadian Institute of Sanitary Inspectors (C.I.S.I.), and that the responsibility and control for this syllabus should rest with these two bodies jointly.
   That any qualified educational institution desiring to present a course of training should present a program of study within the framework outlined in the requirements for study of this joint committee.
   That the joint committee be responsible for periodic revision of the requirements for study.
   That approved schools be reassessed at intervals by the joint committee for continuation of approval.
3. That a joint committee or board as now constituted with representation from C.P.H.A., and C.I.S.I., continue to be responsible for examination and certification for practice of qualifying candidates.
4. That courses of didactic instruction be supplemented by field training and that training be given only in departments and units which would be approved by the joint committee as meeting the requirements necessary for training.

5. That special care and consideration be given to the selection of applicants for training.
6. That sound personnel selection methods be used by certifying bodies and employing agencies in selecting applicants for practice.
7. That personal and academic qualifications should both be assessed in the granting of certification.

These and other items will form the basis for continuing discussion by the subcommittee during the coming year.

Public Health Educators

This matter is still at the stage of preliminary discussion but already a number of items are becoming clear.

Information was gathered as to the provinces in which public health educators are employed, the types of employing agencies, and the problems which may be anticipated in attempting to determine the desirable training and standards required.

There appears to be a lack of agreement among employing agencies with respect to academic training and experience requirements as well as the duties and responsibilities of public health educators. There is an indication of abnormally high turnover among public health educators, e.g., in British Columbia during the past 13 years, of 12 persons recruited, 10 have resigned. On first viewing, the two main contributing factors would appear to be inadequate salaries and job dissatisfaction due, in part at least, to poorly defined roles.

The recommendations of the sub-committees concerning training and standards will depend, to a large extent, upon what employing agencies really want public health educators to do and not just on what they say they want done.

Analysis of training and standards must differentiate between public health educators employed by government at all levels, by voluntary health agencies, and by others such as industry, educational institutions, etc. Representatives of these various groups will be invited to contribute to the further deliberations of the sub-committee.

Summary

The two major activities of the Committee on Professional Education have been with reference to the training and standards for sanitary inspectors and public health educators. In neither, are we prepared to render more than a progress report.

The activities concerning sanitary inspectors will continue to be correlated with the Committee on the Certification of Sanitary Inspectors. It may be that the Council may see fit to strike a special Committee in this regard. However, it is felt that at this stage at least, deliberations by two groups in widely separated areas may be of real benefit.

We would reiterate the point we made in our report last year. The activities of this and other Committees of the Association resolve themselves into studies by local sub-committees. The only opportunity for guidance by the Association as a whole is at the time of the annual meeting. We would, therefore, ask for your earnest consideration of this report and your recommendations for our further activities.

REPORT OF THE COMMITTEE ON THE CHARTER AND BY-LAWS

K. C. Charron, M.D., Chairman

THE COMMITTEE SUBMITTED amendments to the charter to the Executive Council at the annual meeting of the Association held in Montreal May 31 to June 3, 1959. The Executive Council accepted the proposed amendments and these were subsequently approved at the business session of the Association. The Council then requested the Committee to take the necessary action to have the statute amended and to proceed with the by-law revision.

The charter was amended by Bill S9 which was passed by the Senate on February 16th, 1960 and by the House of Commons on March 25. It was given Royal Assent on March 31.

It was decided to follow the same procedure in revising the by-laws as was adopted for the charter. A letter was sent to all members of the Executive Council asking for their views and included with this letter was a copy of the present by-laws with a composite of the amended charter. Twenty-seven replies were received from members of the Executive Council. Thirteen members of Council proposed changes to the present by-laws, while fourteen members of Council were satisfied with the present by-laws. These replies were consolidated and forwarded to the members of the Committee and the nucleus group of the Committee met in Toronto on April 29 to consider the first draft. The second draft of the by-laws will be available to the Executive Council at the Halifax meeting. At that time the Committee will request further guidance with regard to subsequent procedure.

News Notes

National

The following candidates have been granted the Association's Certificate in Sanitary Inspection (Canada), having successfully completed the June 1960 examinations: Daryl G. Anderson, *Penticton*, B.C.; Albert V. Burkart, *Regina*, Sask.; Neville W. E. Cox, *Kimberley*, B.C.; Harold Dean, *Camp Borden*, Ont.; Kenneth F. Degryse, *Winnipeg*, Man.; Victor P. Epp, *Victoria*, B.C.; and Ted T. Zoltan, *Rosedale*, B.C.

Federal

During July a second group of 112 European tubercular refugees was brought to Canada increasing to 212 the number of TB refugees brought at federal government expense as a contribution by this country to World Refugee Year. The government stipulated in the first movement that only one member of a family could have TB. This was relaxed for the second group to permit the entry of families with more than one member suffering from the disease and also single persons with TB.

Federal Appointment

Dr. Joseph W. Willard has been appointed Deputy Minister of Welfare, Department of National Health and Welfare.

Born in Hamilton, Ontario, in 1917, Doctor Willard received his Honour B.A. and M.A. in political science and economics from the University of Toronto. He received his post-graduate training in Government and Economics at Toronto and Harvard Universities and was for two years a Littauer Fellow at the Harvard Graduate School of Public Administration and holds a Master of Public Administration degree as well as an A.M. and Ph.D. in economics from Harvard University.

He has served as an assistant to the executive director of the Unemployment Insurance

Commission, as assistant editor of the Labour Gazette of the Department of Labour, as an Administrative Officer in the Royal Canadian Army Medical Corps and as Executive Secretary of the Canadian Medical Procurement and Assignment Board.

For the past 13 years he has been Director of the Research Division of the Department of National Health and Welfare.

Since hospital construction grants were introduced in 1948 the increase in beds throughout the country has been: active treatment 50,079; chronic and convalescent 8,108; mental 20,319; tuberculosis 5,298—a total of 83,804. Other increases have been: bassinets 10,826; nurses' beds 16,755; interns' beds 425.

Physicians who wish to subscribe to the new Index Medicus may do so through the Superintendent of Documents, Washington 25, D.C. The yearly subscriptions are $25.00 abroad. It is published monthly by the National Library of Medicine and replaces the N.L.M. current list of medical literature and the American Medical Association quarterly cumulative index medicus. The first issue of Index Medicus was published in January 1960. A.M.A. will publish, sell and distribute an annual cumulative index medicus.

British Columbia

A one-day workshop on community health resources for teachers was held at the University of British Columbia on July 11. It was sponsored jointly by the B.C. Teachers' Federation, the College of Education and voluntary health agencies, together with the Provincial and Greater Vancouver departments of health. Most of the teachers attending were taking summer school courses at the University.

The major objective of the workshop was to inform teachers about the community health resources available from the official and voluntary health agencies, including the underlying philosophies, the functions and services of the federal, provincial, and metropolitan health departments and the voluntary organizations. It was found helpful also to explore with the teachers the need for resource materials and teaching aids which they felt would help them in their teaching of health.

Dr. D. A. Clarke, director of the South Okanagan Health Unit, is on a year's leave of absence, while serving as director of a public health research project on pedestrian traffic accidents involving children. The project, sponsored by the University of British Columbia, has been facilitated by a National Health research grant for this purpose.

Canada's first regional travelling clinic for alcoholism started operations in July. Conceived and planned by the Alcoholism Foundation of British Columbia, this new service will bring to one section of the province direct and immediate benefits of the Foundation's extensive experience in the treatment of alcoholism. The area selected is the Kamloops–Okanagan, linking up the main centers of Kamloops, Vernon, Kelowna and Penticton with the smaller intervening communities. Clinics are to be held in the health unit office at each designated center, and no charge is to be made for the service. This extension of operations to areas outside the lower mainland is most welcome. It has been made possible by the recently increased Provincial Government grant to the Foundation.

Dr. Joseph R. Arsenault has been appointed director of the Peace River Health Unit at Dawson Creek. Dr. Arsenault is a graduate of Laval University, with a D.P.H. from the University of Montreal. He also brings with him to his new appointment a background of service in the RCAMC and with the Quebec Department of Public Health.

Alberta

Of unusual interest to public health workers was a pre-convention course on nutrition, the first of its kind in Canada, which was held in Edmonton July 4–6 in connection with the biennial convention of the Canadian Home Economics Association. The course was sponsored by the Nutrition Division of the Department of National Health and Welfare. Guest speakers included Dr. Jean F. Webb, Chief of the Child and Maternal Health Division at Ottawa, and three members of the Provincial Department of Public Health, Mrs. Dorothy McPhail, Director of Public Health Nursing, Miss Elva Perdue, Public Health Nutritionist, and Dr. C. W. B. McPhail, Director of Dental Health. Among Edmonton's visitors during convention week was Dr. J. W. Connelly, Medical Consultant on Dr. Webb's staff, on his first official trip to Alberta.

Dr. W. H. Hill, Medical Officer of Health for the City of Calgary for the last twenty-seven years, retired September 2. Dr. Hill graduated from McGill University in 1919, and obtained his D.P.H. from the University of Toronto in 1932. Having served in his present capacity for almost exactly one half of the time that Alberta has been a Province, he may well be regarded as one of the pioneers of public health in western Canada.

Dr. C. A. W. White, a graduate of the University of Alberta, has been appointed as Dental Officer with the Red Deer Health Unit. Dr. White is a native of Red Deer, and

has been practising in that city since his demobilization in 1946.

Dr. V. E. Capogreco, a graduate of McGill University, has been appointed as Dental Officer with the Drumheller Health Unit. Dr. Capogreco was formerly with Indian and Northern Health Services, and recently obtained his D.D.P.H. from the University of Toronto.

Dr. E. V. Dolinsky, a graduate of the University of Alberta, has been appointed as part-time Dental Officer with the Jasper National Park Health Unit. Dr. Dolinsky has been practising in Jasper for the last two years.

A program has recently been introduced by the Provincial Department of Public Health for the benefit of health units wishing to establish a preventive dental service, but unable to procure the services of a full-time dental officer. Under this scheme a health unit may apply to the Department for the services of a series of roster dentists who have offered, through the Alberta Dental Association, to spend two weeks each in any part of the province. Such a health unit is entitled to receive the full amount of its dental grant for the purchase of portable equipment and for the remuneration of its dentists. Three health units, Athabasca, Edson and Vegreville, have already availed themselves of these facilities, and have thereby been enabled to lay the foundations of a greatly needed service.

Saskatchewan

Dr. Jasper de Meillon Vink, of Mafeking, Union of South Africa, has been appointed medical health officer of the Melfort-Tisdale Health Region. He succeeds Dr. Arnold Lowden who transferred to the Yorkton-Melville Health Region. Dr. Vink received his medical education at the University of Capetown and the University of London.

Miss Vera L. Spencer has returned to the Nursing Services Division after obtaining her Master's degree in public health at the University of Michigan. Her field work included a study of home care programs in the Montefiore Hospital in New York and in Scott and Bourbon counties in Kentucky.

Dr. J. G. Clarkson, a graduate of the University of Glasgow, has been appointed medical director of the Medical Services Division of the Saskatchewan Department of Public Health. In 1958 he began post-graduate studies at Yale University in public health and hospital administration. For the past year he was resident in hospital administration at the University Hospital, Saskatoon.

Mr. Frederick J. Wilson, administrative officer for the Communicable Disease Division of the Department of Public Health, has retired after a career in public health which began shortly after World War I. Known and respected throughout the department for his precise and accurate work, Mr. Wilson has been a key figure in the control of communicable disease throughout the province. On call night and day for more than thirty years, he has been responsible for sending sera and vaccines to all parts of the province to quell or prevent outbreaks of typhoid, diphtheria or poliomyelitis.

Dr. H. D. McDonald has been appointed director of the Hospital Administration and Standards Division of the Saskatchewan Department of Public Health. Dr. McDonald obtained his medical education at the University of Manitoba and his hospital administration training at the University of Toronto.

The following public health nurses have been appointed: Mrs. G. Myers, Moose Jaw Health Region; Miss C. Reban, Rosetown Health Region; Miss E. M. Schultz and Miss F. McAdoo, Weyburn Health Region.

In June of last year, the Saskatchewan Government appointed a committee headed by Dr. F. Burns Roth, deputy minister of public health, to conduct a survey of problems of the aged and persons suffering long-term illness. Recently in Moose Jaw a regional conference was held in furtherance of this survey. An important resolution coming from this meeting empowered the executive of the planning committee to appoint a continuing committee drawn from the conference to study needs and co-ordinate services. Other resolutions dealt with housing and recreational facilities and income—all of which were felt to be inadequate.

The regional conference endorsed the need for a recreational and social center for senior citizens. A resolution called on the continuing committee to consider the advantages of a homekeeper service to provide specially trained people to visit and care for the aged when they are in need of such service.

Miss Lola Wilson, director of the aged and long-term illness project of the Department of Public Health hopes that other regions will take positive steps in this regard in the very near future.

The Saskatchewan Department of Agriculture has organized a Family Farm Improvement Branch to assist farmers with farmstead development and improvement. The first project will be to help farm people install 1,500 water and sewerage systems in selected areas in 1960. The department will

assist farmers in this project by such means as grants up to $300 for outdoor water and sewerage works; furnish materials for same and indoor plumbing, but not for indoor fixtures, at cost; obtain contractor's crews, or organize government crews, to install outdoor water and sewerage works at cost; and operate plumbing schools for farmers. The farmer will arrange to install indoor plumbing and fixtures by doing his own plumbing or by employing a plumber.

Manitoba

The appointment of Dr. J. H. Battershill as Medical Director of the Portage la Prairie Health Unit became effective July 1. Dr. Battershill received his M.D. from the University of Manitoba in 1951 and did post-graduate work in surgery at the Winnipeg General Hospital.

Eight "plumbaramas" were held throughout Manitoba during the month of July. A co-operative venture, sponsored by the Manitoba Department of Health and Public Welfare, the Department of Agriculture, and the Manitoba Power Commission, these plumbaramas, it is hoped, will stimulate interest in modern plumbing on the farm. A highly successful side light of this year's series was the enthusiastic response to the invitation that farmers bring a sample from their water supplies to be tested for hardness.

Dr. W. G. French, following completion of his public health course at the University of Toronto, took over the duties of Medical Director of the St. Boniface Health Unit July 1.

Dr. Mary Russell was appointed Medical Director of the Red River Health Unit at Steinbach succeeding Dr. W. G. French.

The Virden Health Unit was expanded on July 1 to include the rural municipality of Daly and the Town of Rivers. This increases the population served by the unit, by approximately 6,000.

Formerly a sanitary inspector with the St. James Health Unit, Mr. Wally Noyes has been appointed Supervisor of Elderly Persons Housing and Institutions with the Welfare Department.

Ontario

Mr. Cyril Greenland has been appointed as the new Consultant in Social Work to the Ontario Department of Health following the resignation of Professor A. Perretz. Mr. Greenland is a graduate of the London School of Economics (Mental Health and Social Administration) and was formerly Chief Psychiatric Social Worker at the Ontario Hospital, Whitby.

School of Hygiene, University of Toronto

A "Breakfast Meeting" of the Alumni of the School of Hygiene was held on June 1 in the Nova Scotian Hotel, Halifax, at the time of the Annual Canadian Public Health Association Meeting. In the election of new officers Dr. George Walton, of Regina, was made President and Dr. M. H. Brown, of Toronto, Vice-President. Dr. D. L. MacLean and Mr. D. M. MacIntyre were re-elected Secretary and Treasurer respectively. Dr. Brown, the Associate Director of the School, reported on the general progress of the School.

This year through the Alumni efforts the first Donald T. Fraser Memorial Lecture was given by Dr. G. D. W. Cameron. The award of the Donald T. Fraser Medal was made jointly this year to Dr. Dita K. Evans, of Jamaica, and Dr. E. R. Langford, of Ontario. They tied for first place as the outstanding student in 1959–1960.

Thirty-eight were present at the breakfast meeting as follows: A. S. Arneil, J. H. Baillie, R. D. Barron, C. J. Beckwith, W. I. Bent, A. M. Breuls, M. H. Brown, Miss M. C. Cahoon, G. D. W. Cameron, A. F. Chaisson, G. Charest, L. A. Clarke, R. D. Defries, A. Dumas, M. Fitch, J. Gilbert, J. E. Hiltz, D. Hutchison, G. E. Maddison, G. K. Martin, J. A. Melanson, J. B. Morison, W. Mosley, G. W. O. Moss, S. S. Murray, A. L. McKay, H. R. McLaren, D. M. McLean, C. W. MacMillan, N. F. Macneill, J. S. Robertson, C. E. Robinson, J. W. Rogers, Miss M. Sherry, G. M. Smith, J. J. Stanton, R. J. Wilson, G. E. Wride.

Books and Reports

PREVENTIVE MEDICINE: Principles of Prevention in the Occurrence and Progression of Disease. *Edited by Herman E. Hilleboe, M.D., and Granville W. Larimore, M.D. W. B. Saunders Co., West Washington Square, Philadelphia 5, Penn., 1959, 731 pages, $12.00.*

This book sets forth the new way to look at preventive medicine for medical students, general practitioners, specialists and professional workers in official and voluntary health agencies. The main theme can be simply stated: "The book distinguishes between the prevention of occurrence of disease and disability and the prevention of their progression. In every field primary prevention, the prevention of occurrence, is the first goal. Secondary prevention, prevention of progression, is more difficult, more costly and less likely to be successful because damage to the human body is already present." These sentences from the preface present the authors' purpose, namely, to outline a practical guide for physicians who are willing to incorporate preventive medicine as an integral part of their day-by-day practice in the office, in the hospital, in the home, and in the community.

Dr. Hilleboe, State Commissioner of Health, New York, is internationally known as a public health administrator and teacher. Dr. Larimore, Deputy Commissioner of Health, was for many years Director of Public Health Education in the department. Associated with the senior officers are twenty-nine contributors of whom all but four are members of the New York State Health Department. Each of the contributors is responsible for a section in a field in which he is a specialist. The book is presented in three parts: *Part I, Prevention of Occurrence* includes sections on the Control of Environmental Factors, Prophylactic Measures Against Diseases, Provision of Proper and Adequate Nutrition, Elimination of Predisease Conditions and Preventive Dentistry; *Part II, Prevention of Progression* includes sections on Periodic Health Inventories, Early Detection of Disease, Follow-Up of Screening and Diagnostic Examinations, Rehabilitation and Alcoholism; *Part III, Supporting Services for Preventive Medicine* includes sections on the Role of Education in Preventive Medicine, Services Aiding the Practice of Preventive Medicine.

The book is eminently practical. Most of the contributors have practised and taught preventive medicine in medical schools, in post-graduate courses throughout the State and among the members of their own hospitals, laboratories, and field clinics. The authors have made a highly important contribution to preventive medicine with the publication of this important new work. It will be welcomed in faculties of medicine as a textbook.

THE SYMPTOM AS COMMUNICATION IN SCHIZOPHRENIA, *Lieutenant Colonel Kenneth L. Artiss, M.C. Grune & Stratton, Inc., 381 Fourth Avenue, New York 16, N.Y., 1959, 233 pages, $5.75.*

This monograph presents certain of the results obtained in the course of a multidisciplinary investigation initiated in 1955 by the Division of Neuropsychiatry of the Walter Reed Army Institute of Research with the co-operation of the office of the Surgeon General, U.S. Army. The objectives were the exploration of two major areas in military psychiatry, the investigation of principles of therapeutic methods and the definition of the relevant phenomena constituting the course of military schizophrenic patients. With Lieut.-Col. Artiss, Bruce L. Bushard, Kai T. Erikson, David H. Marlowe, and Russell H. Rowe contributed valuable chapters. The data represent the work accomplished by the authors and their assistants during the first fifteen months of the active study.